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FOURTH REVIEW OF TESTS PUBLISHED IN SPAIN: FORM AND CONTENT

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La evaluación de tests y divulgación de las memorias resultantes se ha implantando en el panorama internacional con el claro objetivo de mejorar el uso de los tests, y con ello la práctica profesional. Se trata de una herramienta que ofrece al usuario de tests una revisión independiente sujeta a procedimientos y criterios definidos. En España se han llevado a cabo cuatro ediciones del proyecto de evaluación liderado por el Consejo General de la Psicología (COP). Básicamente existen dos modelos de evaluación de tests, el modelo Buros y el modelo de la European Federation Psychologists' Associations (EFPA), utilizado por el COP. Ambos, comparten objetivos y contenido, y excluyendo varias cuestiones de formato y gestión, el fondo en ambos modelos es el mismo. En este trabajo se ofrecen los resultados de la cuarta edición del proyecto de evaluación de tests del COP adecuándolos a las pautas generales que sigue un procedimiento de evaluación de tests, y mostrando los puntos críticos en cada fase del proceso.
Palabras clave: *Tests, Uso de tests, Evaluación de tests, Psicometría.*

Assessing the quality of tests and disseminating the results has been implemented in the international arena with the aim of improving testing and professional practice. Assessing tests provides users with an independent review, which follows clearly defined procedures and criteria. In Spain, the Spanish Association of Psychology (COP) leads the "test evaluation" project, which has recently completed its fourth edition. Basically, there are two primary assessment models; the Buros model and the European Federation of Psychologists' Associations (EFPA) model, which has been adopted by the COP. The two models share the same objectives and content; excluding the evaluation format and the management system, they are similar in essence. In this paper, we present the results of the fourth edition of the Spanish test evaluation program following the general guidelines for assessing the quality of tests, and we explain the critical points affecting each phase of the process.
Key words: *Tests, Tests use, Assessing tests quality, Psychometrics.*

The evaluation of tests and the dissemination of the resulting reports has been implemented internationally with the clear aim of improving the use of tests, and thus the professional practice. In our environment the action was implemented by the Test Commission of the General Council of the Spanish Psychological Association in 2010 (Muniz et. al., 2011), and with the publication of this paper four editions have now been established (Ponsoda & Hontangas, 2013; Hernández, Tomás, Ferreres & Lloret, 2014) of a valuable professional tool, the main formal, procedural and content aspects of which we examine here.

There are basically two models of test evaluation: the model proposed by the European Federation of Psychologists' Associations (EFPA) (Evers et al., 2013), which has also been adopted by the General Council of the Spanish Psychological Association (COP), and the American model, epitomised by Buros (Carlson & Geisinger, 2012). Analysis of the content and processes followed by these two models reveals that while they use different evaluative formats, the similarities between them are greater than the differences. They both share the same intention and starting point: that the publication of independent reviews subject to well-defined procedures and scientific criteria mean a boost in the process of continuous improvement in the construction/editing/use of tests.

The general assessment procedure can be summarised in 5 steps: (a) choosing the tests to be reviewed; (b) identifying the reviewers; (c) evaluating the test; (d) revising and editing; and (e) editorial comments and final report. Each stage counts towards the final result, and in each one there are risks that must be controlled to ensure the quality of the final report, thus ensuring that the assessment meets the intended objectives.

Before reviewing the test evaluation models, the structural differences between the bodies that implement them should be noted. Buros operates as an independent non-profit organisation, belonging to the University of Nebraska, in which 12 people work and it has 8 post-graduate collaborators. The Spanish review process rests on a general coordinator appointed for the purpose by the COP Test Commission. The coordinator is responsible

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for the administrative and scientific implementation, although for the former task the coordinator has the support of the COP and is free to appoint a team of collaborators to assist in the administration.

Buros has extensive experience in evaluating tests, beginning in 1938 with the publication of the first *Mental Measurement Yearbook* (MMY, Buros, 1938). The MMYs are compendiums that present the collection of test evaluation reports carried out by this institute. To date, 19 volumes have been published, in which approximately 10,500 tests have been reviewed. Buros has also published two volumes related to test description, which are sold with the titles *Tests in Print* (TIP) and *Pruebas Publicados en Español* (Tests Published in Spanish) (PPE; Schlueter, Carlson, Geisinger, & Murphy, 2013). They are works that have an encyclopaedic format, providing descriptive lists of the tests that are available on the market. The increase in the Spanish-speaking population in the United States was the impetus for the creation and publication of PPE. The volume presents information about tests available in the United States that are either fully published in Spanish or include any part in this language. The current edition comprises 422 entries organised alphabetically by the test name (Carlson & Gonzalez, 2015).

CHOOSING THE TESTS TO REVIEW

Choosing the tests to be assessed generally begins with a review request from the editors. In Spain, the requests are processed through the Test Commission of the General Council of the Spanish Psychological Association (COP) (see Table 1; Tests reviewed in the 4th edition), which currently has within its membership representatives of three publishers. In Buros the requests are made directly from the Buros offices at the University of Nebraska. The Buros Center submits the applications received to a first screening in order to check that the tests meet certain conditions, including that they (a) provide psychometric data; (b) have an administration/correction/interpretation manual; and (c) present a technical manual. Without these requirements the tests are not evaluated. The direct consequence of this obligation is that non-commercialised tests fall outside the review process. In Spain the test commission has the power to propose the review of non-commercialised tests. In fact, a non-commercial test was evaluated in the second edition. Since the information and additional elements that accompany a publication in the format of a scientific paper are not comparable, in form or in content, with the material contained in a test sold by a publisher, the review of the test raised additional needs for the assessment process (Ponsoda & Hontangas, 2013).

After choosing the tests, the publishers submit three full copies to the body responsible for the review. The number of copies sent enables the coordinator or the administration office, where appropriate, to have a set of each test, which facilitates the checking of the evaluation information at any point in time. In this part of the process, Buros produces a descriptive sheet on the characteristics of the test, providing information about the title, objectives, scores, target population, administration time, acronym, publisher, publication date, authors, administration format and price.

IDENTIFICATION OF REVIEWERS

The evaluation process rests on the independent and unbiased judgment of the reviewers, on their capability

TABLE 1
LIST OF TESTS EVALUATED

Acronym	Test	Publisher
ABAS-II	Sistema de Evaluación de la Conducta Adaptativa [Evaluation System for Adaptive Behaviour]	TTEA Ediciones
BADyG/M-r	Batería de Aptitudes Diferencial y Generales. Nivel M Renovado [Battery of Differential and General Aptitudes. Renovated Level M]	CEPE, S.L.
BETA	Batería para la Evaluación de los Trastornos Afásicos [Battery for the Assessment of Aphasic Disorders]	Instituto de Orientación Psicológica EOS
BSI-18	Inventario Breve de 18 Síntomas [Brief Symptoms Inventory of 18 Symptoms]	Pearson Educación
CECAD	Cuestionario Educativo-Clínico: Ansiedad y Depresión [Educational-Clinical Questionnaire: Anxiety and Depression]	TEA Ediciones
EHPAP	Evaluación de Habilidades y Potencial de Aprendizaje para Preescolares [Assessment of Skills and Learning Potential for Preschoolers]	Instituto de Orientación Psicológica EOS
PAIB-1	Prueba de Aspectos Instrumentales Básicos en Lenguaje y Matemáticas [Test of Basic Instrumental Aspects in Language and Mathematics]	CEPE, S.L.
PECC	Prueba para la Evaluación de la Cognición Cotidiana [Test for the Evaluation of Daily Cognition]	Instituto de Orientación Psicológica EOS
SCIP	Screening del Deterioro Cognitivo en Psiquiatría [Screening of cognitive Impairment in Psychiatry]	TEA Ediciones
WMS-IV	Escala de Memoria de Wechsler –IV [Wechsler Memory Scale -IV]	Pearson Educación
WPPSI-IV	Escala de Inteligencia de Wechsler para Preescolar y Primaria [Wechsler Preschool and Primary Scale of Intelligence]	Pearson Educación

and experience in analysing the documents and materials that make up the test, and in developing justified and fair arguments. The prudent identification of suitable professionals for this work is essential.

In the phase of identifying reviewers, for each test the most common strategy is to select a pair of specialists with complementary profiles; one with a strong background in measurement, and a second with a high level of experience in the area measured in the test. Having the two professional profiles allows for sources of opinion built on different perspectives and experiences. Together, their contributions help us to obtain more comprehensive assessments that include formal, substantive and applied aspects.

According to the criteria used by the COP and Buros, the reviewers must demonstrate experience in the use/construction of tests. Buros has a database of 900 authors from which to select those it considers most appropriate, and upon whom it imposes certain restrictions in order to avoid bias; for example, two reviewers of the same test must not belong to the same university or publishing company; and attempts are made to combine expert reviewers with young authors. In Spain the work of identification and selection is the responsibility of the coordinator who, using the literature studies, tries to match the necessary profiles to guarantee good evaluations (Table 2; Reviewers of tests in the 4th edition). As compensation for the time and effort dedicated to the review, Buros sends a free copy of the MMY in which they have participated; the COP offers 50 to each reviewer. In both cases the evaluators keep a copy of the reviewed test.

TABLE 2
REVIEWERS WHO CARRIED OUT THE EVALUATION OF THE TESTS

Reviewers	Affiliation
Juan Antonio Amador	Universidad de Barcelona
Sonia Alfonso Gil	Universidad de Vigo
Constantino Arce	Universidad de Santiago de Compostela
Juan Ramón Barrada	Universidad de Zaragoza
Roberto Colom	Universidad Autónoma
Ana Delgado	Universidad de Salamanca
Eduardo Doval	Universidad Autónoma de Barcelona
Sergio Escorial	Universidad Complutense
Sara Fernández Guinea	Universidad Complutense
María Paloma González Castro	Universidad de Oviedo
Francisco Gutierrez Martinez	Universidad Nacional de Educación a Distancia
José Antonio López Pina	Universidad de Murcia
Urbano Lorenzo Seva	Univeritat Rovira i Virgili
Luis María Lozano	Universidad de Granada
Ignacio Montorio	Universidad Autónoma de Madrid
Juan Antonio Moriana	Universidad de Córdoba
Cristino Pérez	Universidad de Granada
Luz Pérez Sánchez	Universidad Complutense
Pedro Prieto Marañón	Universidad de La Laguna
Antonio José Rojas	Universidad de Almería
Bonifacio Sandín	Universidad Nacional de Educación a Distancia
Paula Samper	Universidad de Valencia

The initial contact with the reviewers is carried out by email; in the email, prospective reviewers are informed about the test evaluation project, they are invited to review a particular test, they are advised to reject the review in the case of conflicting situations, and a recommended three month period is set for the review to take place. In the 4th edition, reviewers were explicitly asked to sign a declaration of conflict of interest to ensure the impartiality and independence of the review.

Once the reviewers have agreed to participate in the evaluation, they are sent the material. The reviewers carry out their work with the same material that a user would receive upon buying the test. The test evaluation questionnaire is sent together with the material provided by the publisher, (CET; Prieto & Muñiz, 2000), which in the third edition had a number of modifications and a document with information clarifying some of the issues contained in the questionnaire; (Hernández, Tomás, Ferreres & LLoret, 2014). Buros sends a guide to the review process and the expectations it involves.

TEST EVALUATION

The evaluation of the tests is the most delicate phase of the process. The reviewers have to produce an evaluative report on the test based on the detailed analysis of the information provided in the manual, and the materials accompanying it.

The evaluation consists of completing a questionnaire that guides the reviewer on the most important aspects to consider whilst carrying out their work. The formats of the evaluation questionnaires used by Buros and the COP are different. Buros' work is carried out using a form with test items for which it is expected that the reviewer will express a coherent and informative judgement. The form includes five points to be developed: (a) general description of the test; (b) construction; (c) technical report with an analysis of standardisation, reliability and validity; (d) general comments conveying the following: (1) the strengths and weaknesses of the test; (2) references to current research that supports the theoretical model on which the test is built, and (3) evidence to support its use. Finally (e) there is a brief summary of six or seven sentences in which the reviewer summarises their general conclusions and recommendations regarding the correct use of the test.

The test evaluation questionnaire (CET; Prieto & Muñiz, 2000) used by the COP combines closed answers and open answer essay questions. The CET is divided into three sections: (a) general description of the test; (b) evaluation of the characteristics of the test and (c) overall evaluation of the test. The first section is a descriptive technical form on the test that provides information on aspects such as the title, objectives, scores or the application time. It corresponds, largely, with the descriptors that Buros prepares in the phase of test selection. The second section contains 37 items with graduated responses (inadequate, adequate but with deficiencies, adequate, good, excellent) with the aim of quantifying the quality of the feasibility studies, validation and weighting. It also includes essay items for these three aspects in which the reviewer produces an informed judgment. The last part of the CET is dedicated to a single open question that asks the reviewer to comment on the test, including its strengths/weaknesses and a summary of the most relevant information for the correct use of test.

Whether the number of sections in the questionnaire is three or five, both formats address the same points in the assessment, which can be interpreted in terms of concurrent validation. As the two are similar in content, it is worth asking whether there are advantages and disadvantages in using one format or the other. The answer to this question should be given by the effects of using both types of item on any standardised test. The nature of the item affects, among other things, the score, the representation of the construct and the ease / difficulty of constructing items (Haladyna, 2004). Assuming they are well constructed, closed answer items: (a) are versatile; (b) guarantee the evaluation of the significant points of the area under evaluation; (c) enable fast and efficient quantification; (d) are easier to answer; and (e) permit item analysis. However, they also have disadvantages. In closed response formats and complex assessments, occasionally the depth and specificity of the evaluation may not be perfectly reflected in the response options. For example, with regards to the CET, the valuation of the quality of a weighting sample is analysed in the same way for a questionnaire on intellectual skills intended for the community population as for a diagnostic questionnaire used with clinical groups. In both cases the number of participants is analysed in the research, but the values are difficult to compare as they come from different populations. Perhaps, in these situations, a note could be added in reference to the type of sample/population.

The CET adds, to the advantages of the evaluation via essay questions, a quantitative assessment of the characteristics of the test, which can be read as a quick photograph of the points evaluated. It is an aspect that is complementary to the essay questions and adds value to the evaluation, but does not replace it. Providing quantitative values for each of the sections does not legitimise the calculation of a final mean for assessing the quality of a test. The validation of a test must always take into account the proposed use of the scores (AERA, APA & NCMEA, 2014; Elosua, 2003), and the selection of a test by a potential user must consider the context of application; if the inference of the scores is related to the prediction of future behaviour, however excellent the quality of the materials or the weighting sample, and no matter how high the scores are in those sections, the aspect related to the predictive evidence of validation is always one of the first criteria to observe; and an arithmetic mean calculated across all of the aspects evaluated does not give this information.

With respect to the items of the CET in the four editions carried out to date by the COP, a number of items have been detected whose current wording raises doubts for the assessor and which should be reviewed, as has been noted (Hernández, Tomás, Ferreres & Lloret, 2014; Muñiz, Fernandez-Hermida, Fonseca-Pedrero, Campillo-Álvarez & Peña-Suarez, 2011; Ponsoda & Hontangas, 2013). To ensure a better understanding of the content of the items, in the third edition (Hernandez et.al, 2013) a supporting document was drafted with some modifications also included at that time. We opted to improve the CET series in this way, notably by reviewing some of the items and by adding explanatory statements as was done in the original version of the EFPA questionnaire (http://www.efpa.eu/professional-development). To do this, it would be advisable, as Ponsoda and Hontangas indicate (2013), to work on a computerised version of the CET to facilitate its completion and to allow the addition of hyperlinks with explanatory statements.

REVISING AND EDITING

Once the two evaluations of each of the tests have been received, the editorial process proceeds to revise the reports received. Buros and the COP work differently at this point, which is logical given that the final reports that the two bodies produce are different. Buros publishes the two reviews that have been carried out for each test; the COP produces a single report that synthesises the work of the two reviewers who analysed the test.

Buros pays attention to verifying the accuracy of the data and matters of style, with the aim of achieving a final report that is in accordance with its editorial direction. Once the texts have been revised and corrected, Buros publishes in the MMY the reports that have been

submitted by the reviewers. For the factual review Buros has two or three PhD students who inspect and correct aspects such as the references or the format.

The COP elaborates a unique text-report for each test, which condenses the quantitative information and summarises the evaluations provided by the two reviewers. Editing the evaluation basically means reviewing and enriching it, making sure there are no mistakes regarding the objective data, and ensuring that the language used is homogeneous, correct, appropriate and not hurtful. The editor analyses and corrects, where appropriate, the tone of the review, ensuring the correct use of psychometric terms and the appropriateness of the language to the profile of the potential user; the use of technical terms or, in certain cases, overly methodological jargon is avoided. Without rejecting the viewpoint of the reviewer, negative comments are eliminated in the editing process, and the revisions are shaped to offer a summary that is clear and accurate on the characteristics of the test that may be important for the potential user. The editing does not alter the nature of the professional judgments made by the evaluators, but it does correct observations that are poorly descriptive. The aim of the review process is not to highlight the limitations or shortcomings of a test, but to put them in the appropriate context.

In producing the test report, we assume that the ultimate goal of the review is not to give the test an absolute rating that the user will adopt as a measure of quality and justification for its use, but rather we uphold a critical and active reading, based on a professional opinion and in which the context of the test use is important. As Thorndike (1999) noted, the reviews must be considered with mature judgment and knowledge of the situation in which the test is to be applied; both judgments fall to the user.

Once the reports have been edited, Buros sends them to the reviewers for them to approve the modifications. In the model followed by the COP this step is omitted because the reviews are not published in their original format.

EDITORIAL COMMENTS AND FINAL REPORT

Once the editing process has finished, the reports of the tests that have been evaluated are sent to the publishers for review. The publishers usually send the reports to the authors of the tests. Both the authors and the editors write their comments and submit them to the coordinator. This stage is important to ensure that the reports do not contain errors or inaccuracies; if any are detected, they are corrected before publication.

Buros has established that if major changes are required at this stage, these are forwarded directly to the reviewer for his or her approval or rejection. The COP does not include this option. Moreover, publishers and authors in the Buros process are only permitted to object to errors of fact; revising the opinions of the reviewers is not permitted.

The objective of this stage is to ensure the precision and accuracy of the information included in the report. Our model, which is still young, does not have defined guidelines on the role of publishers at this stage, and there is variability in the responses of the editors; from those who simply correct any inaccuracies, to those who send additional material such as scientific articles or dissertations in which the test in question has been used. It would be important to establish guidelines for the author/editor to concentrate on the factual information; and focus his or her comments on the material evaluated by the reviewer.

After correcting the mistakes and analysing the suggestions, the final report is sent for each of the tests, which will form part of the MMY or be published on the webpage of the COP (https://www.cop.es/ index.php?page=evaluacion-tests-editados-en-espana)

DISCUSSION AND CONCLUSIONS

TIt is an increasingly widespread idea that good professional practice includes the use of tests that have been evaluated by external bodies (Carlson & Geisinger, 2012; Evers, Sijtsma, Lucassen, & Meijer, 2010; Ponsoda & Hontangas, 2013) and that therefore the evaluation of tests is a support tool in the professional work of the psychologist.

If the purpose of the evaluation is to improve the professional practice, the question is, what information does a potential user need in order to consider the use of a test in an applied or research situation? This is the fundamental issue in the evaluation process, and derived from it is the importance of: (a) a clear and well-structured handbook; (b) the quality of the materials; (c) the technical description of the test with accurate information concerning the analysis of its construction, reliability, validation and weighting, (d) the need to justify the use of the scores in a particular context, and (e) references to recent investigations with the theoretical model on which the test was built.

The points covered by the evaluation of tests, whether the format is more or less open, have become the gold standard for constructing/editing a test. As it constitutes an external evaluation standard, the CET must meet requirements concerning its validity and provide a complete representation of the domain being evaluated. However as well as the source of criterial evidence, it is

important to consider consequential aspects of test use. The evaluation of tests has direct consequences for all phases involved in the construction/editing of tests, insofar as it promotes improvements in the construction process and encourages publishers to adopt increasingly rigorous criteria for the publication of tests and manuals. This is not the only consequence, however. The professional impact of the evaluation of tests has consequences for the undergraduate and graduate training of the psychologist. Given the importance of the tool, and the need for an active reading of the evaluation reports, the reviewing of tests is being incorporated into the academic curricula of psychology in subjects related to psychometrics and assessment. Also, perhaps especially in the United States, fairness of tests and assessments for all subcomponents of the population is an important consequence and reviewers are encouraged to comment on the appropriateness of measures for different ethnic, cultural, ability, and other like groups. The acceptance of the test review by academia, by the authors, the publishers and the users is positive. The publishers are allies in this process, and we are certain, both because of their attitude and their willingness that they agree with the guidelines set by the COP.

The test review plan is confined to an ambitious program of projects to improve the use of tests (see Elosua and Muñiz, 2013), projects that have been designed and brought to fruition at a moment that is clearly defined by the development of psychometrics, which is beginning to be referred to outside Spain as the Spanish school of psychometrics. The four editions published to date allow us to conclude that the balance of the project has been positive. But the task is not finished; the review of tests as a tool and gold standard requires continuous work to improve procedures, formal and substantive, in order to fulfil its goal: to provide relevant information about the tests available to the professional psychologist. It is therefore important to remember the observations made in the previous issues affecting specific content and proposals for improvement, which are now being introduced in a new version of the CET.

Based on the COP's still fledgling experience of reviewing tests, we believe it would be appropriate to establish a clear editorial direction to collect and systematise objectives and expectations for each of the five stages into which we have divided the evaluation. It is necessary to formalise a theoretical and procedural framework for each of the actors involved (the coordinator, the evaluator, the publishing company/the author), which defines each of their roles in every phase of the process. Since we are working with a questionnaire, the objective should be to standardise the conditions of application and to ensure that the objectives of the assessment and the procedure are understood by

TABLE 3
SUMMARY OF THE MEAN QUALIFICATIONS OF THE EVALUATED TESTS

	Tests										
Characteristics	**ABAS-II**	**BADyG/M-r**	**BETA**	**BSI-18**	**CECAD**	**EHPAP**	**PAIB-1**	**PECC**	**SCIP**	**WMS-IV**	**WPPSI-IV**
Quality of the materials and documentation	4.5	4	3	3	4.5	4	4	3.5	4	5	4.5
Theoretical fundamentation	4	3	3.5	2	4	3	3	4	4	4.5	5
Spanish adaptation	4	NOT APPLICABLE	NOT APPLICABLE	3	NOT APPLICABLE	3	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	4	5
Item analysis	- -	4	- -	- -	5	- -	- -	3	3	- -	3.5
Content validity	3.5	3	3	3	4	2	3	3	3	4	5
Construct validity	5	3	4	2	5	3	2	3.5	4	4	4
Analysis of bias	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	2
Predictive validity	- -	3.5	2	- -	- -	3	4	2	3.5	4	3.5
Reliability: internal consistency	5	4.5	3.5	5	5	3.5	5	3	4	4	3.5
Reliability: stability	2.5	- -	- -	3,5	- -	- -	- -	2.5	3.5	3	3.5
Reliability: equivalence	- -	- -	- -	- -	- -	- -	- -	- -	3	- -	- -
Weighting	4.5	4.5	2.5	3.5	4.5	2.5	3.5	2.5	4	4.5	4.5

Note. - - Information not provided.
Evaluation scale: 1(Inadequate) – 2 (Adequate but with deficiencies) – 3 (Adequate) – 4 (Good) – 5 (Excellent)

all. The need for a clear editorial direction is particularly relevant in the COP model because, although the final report maintains the intent and tone provided by the reviewers, the format is altered and this can sometimes generate confusion for the professional who carried out the review.

In conclusion, we believe that, for future editions, a multiannual editorial team should be established, responsible for conveying the COP's editorial direction in the review process, and to establish the objectives and expectations for each stage of the process. We agree with Carlson and Geisinger (2012) that the review of tests must stimulate progress towards professional standards of test construction in which good work prevails and poor work is rejected, at the same time as it encourages the authors and publishers to develop manuals that include detailed information on construction, standardisation, psychometric properties, and appropriate and inappropriate uses of the test. The continuous incorporation of psychometric advances must not be left out however, in order to bridge the distance between theory and practice (Elosua, 2012). Clearly, psychology and professional practice are no longer the same as when they began. The psychometric models have progressed, the theories have evolved, and the problems and needs of the psychological practice change and adapt to the needs of each moment. Since the publication of the first tests, concepts such as reliability and validity have been enriched, and the scientific, professional and ethical requirements demanded of tests have adapted to new needs (De Boeck & Elosua, in press). In this evolution, the process of continuous assessment of tests plays an important role as a stimulus and incentive for the rapprochement between theory and practice.

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PERSONALITY AND CLINICAL TESTS IN SPANISH FOR ASSESSING JUVENILE OFFENDERS

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La evaluación psicológica de los adolescentes infractores es imprescindible en diversas etapas de su recorrido por los servicios de justicia juvenil. Gracias a esta evaluación se garantiza la exigencia legal y la eficiencia de las medidas judiciales y educativas que se prescriben en estos servicios. En el presente trabajo se revisan las principales pruebas de evaluación psicológica en español disponibles para profesionales de la psicología que trabajan con adolescentes infractores en los diversos servicios de justicia juvenil de los países hispanohablantes. Clasificaremos estas herramientas en tres grupos: Personológicas adecuadas para cualquier contexto profesional de la Psicología, Clínicas, cuya utilidad inicial se circunscribe al trabajo con adolescentes que presentan necesidades de salud mental y Forenses, aquellas desarrolladas especialmente para su uso en adolescentes atendidos en los servicios penales. Los instrumentos forenses se describen en la segunda parte de este artículo (en este mismo número de la revista). Para cada apartado se presentan y revisan los instrumentos más importantes y de utilidad contrastada.
Palabras clave: *Evaluación psicológica, Justicia juvenil, Personalidad, Clínica, Forense.*

The psychological assessment of offenders throughout the different stages in the juvenile justice system is essential. It ensures the adequacy of the legal and educational measures to be applied in the process. This paper reviews the main tests of psychological assessment available in Spanish, suitable for use by psychology professionals who work with young offenders in the juvenile justice services in Spanish-speaking countries. We classify these tools into three groups: a) personological, i.e. generic tools, suitable for any professional context in psychology, b) clinical, i.e. tools whose initial use has been limited to working with adolescents with mental health needs, and c) forensic, tools that have been specially developed for use in the juvenile justice population. This last group is described in the second part of this article (which appears in this same issue). The most important instruments of proven utility are presented and reviewed for each group.
Key words: *Psychological assessment, Juvenile justice, Personality, Clinical, Forensic.*

The procedures of applied psychology in juvenile justice processes are in a state of change and improvement with the aim of achieving substantial progress in all services dealing with juvenile offenders (Heilbrun, 2016). These changes are in line with the developments that are taking place in developmental criminology, psychology of the life cycle, clinical psychology and neuroscience, as these disciplines are discovering mechanisms and processes that give us a better understanding of why the antisocial behaviour of adolescents begins, continues and ends (Farrington, 1992; Grisso, 1998; Moffitt & Caspi, 2001; Steinberg, Cauffman, Woolard, Graham, & Banich, 2009). Among the most prominent advances and the ones of great professional significance are those relating to practices in the assessment of antisocial and violent behaviour, personality traits, clinical states and many other criminological characteristics typical of juvenile offenders (Andrews & Bonta, 2010). These advances include reconsidering the use of the classic psychological tests, and the introduction of new tools for the risk assessment and management of violence and juvenile recidivism (Dematteo, Wolbransky, & Laduke, 2016; Morizot, 2015). Many benefits are being obtained with this renewal, derived from the application of psychology as a complementary and indispensable science in juvenile justice services as efficiencies are achieved, since the tests and other assessment tools guarantee a professional performance of greater rigour, objectivity and transparency (Grisso, 1998).

The psychological evaluation of adolescents in general and offenders in particular, is a demanding challenge, since as well as the difficulties of psychological assessment, applying the assessment tools to adolescents involves dealing with a number of individual psychological attributes and characteristics subjected to processes of rapid change and constant development, in which large inter- and intra-individual variabilities are observed (Lemos-Giráldez, 2003; Sroufe & Rutter, 1984; Vincent & Grisso, 2005). These processes of change and development occur simultaneously (sometimes in an un-

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synchronised way) in different areas such as the biological, emotional, attitudinal or cognitive areas, and they are not always linear processes, but rather they have discontinuities in their course, as well as very idiosyncratic accelerations or decelerations (Steinberg et al., 2009; Vincent & Grisso, 2005). The change from childhood to adulthood is a basically pre-programmed process, common to all adolescents, but it is also very individualised, with significant inter- and intra-individual variations. This changing reality greatly complicates the psychological evaluation and increases the probability of error when, due to ignorance or lack of expertise in the subject, generalisations are made regarding adolescent behaviour, not taking into account all the difficulties and considerations necessary for its rigorous evaluation. In spite of this, adolescents also have permanent individual characteristics that can be evaluated, although they may not yet have acquired their final form and they tend to be mixed with attitudes and behaviours that may be transient in young people's process of development. This is precisely what makes it possible for adolescents to be a dynamic group with clear potential to respond to intervention (Grisso, 1998).

It has been known since the beginning of applied psychology that every professional field represents a challenge to the procedures and techniques of psychological evaluation. The forensic field is no exception, and has its peculiarities of great importance due to the legal regulation and the consequences all juvenile justice processes have for the adolescents. For example, if the evaluation is carried out during the trial where a young man faces a custodial sentence of eight years in a closed centre, as a possible legal response, their emotional state may show the effect of this punitive measure significantly, raising the indicators of anxiety or depression, which in turn automatically affect the evaluations. Another phenomenon of this professional field is the understandable tendency of the adolescents being evaluated to lie, pretend or even give answers of acquiescence and conformity which does nothing to help their situation regarding the educational measures that are applied to them or other effects specific to passing through juvenile justice services (Archer, Stredny, & Wheeler, 2013; Echeburúa, Muñoz, & Loinaz, 2011).

If we ask which psychological characteristics specific to adolescents are important and should be evaluated in the context of juvenile justice, the answer will depend largely on the stage the adolescent is at, within the individualised circuit of the justice services (Cano & Andres-Pueyo, 2012; Grisso, 1998). For example, if they are starting the judicial process, i.e., in the pre-sentence phase, and they demonstrate serious difficulties in their competence to appear as a defendant, the forensic professionals should evaluate issues such as cognitive impairment or the presence of severe and chronic psychopathological disorders. For these purposes, in addition to the appropriate psychological interviews and examinations, one can use tests that measure cognitive abilities and intelligence, instruments that assess mental and/or emotional disorders and even protocols for preventing and managing the risk of recidivism (Grisso, 1998). In the decision process that implies that the adolescent is deserving of a sanction or educational measure, psychological evaluations help suggest to the judge which measure may be more suited to the conditions and life situation of adolescents; or if the adolescent has directly been given a punishment or educational measure, whether in a closed, semi-open or community regime, an assessment is generally required that individualises their needs, in order, firstly, to regulate the intensity of the intervention (in cases of measures to be applied in closed regimes it can help the classification of the adolescent within the enclosure) and, subsequently, the treatment characteristics. At each of these moments we suggest that, among other more specific assessments, at least one mental health and/or emotional assessment of the teenager should be considered, incorporating a screening for mental health or personality and/or psychopathology, in addition to an assessment that includes the risk assessment of recidivism in the immediate or medium term future (Grisso & Underwood, 2004).

The aim of this review is to present generically the main tests of psychological evaluation available in Spanish, for use by psychology professionals who work with young offenders in Spanish speaking countries. We will classify these tools into three groups a) personological, generic tools for use in any specific professional context of psychology, and which are also useful in juvenile justice, such as assessment scales of intelligence and personality, b) clinical, that is, those whose origins and properties are based on work with the adolescent population who have mental health needs, such as MACI, and c) finally those that have been developed particularly for use with forensic populations, such as the SAVRY or PCL-YV among others. For each group, we expose, at considerable length, the characteristics of the instruments and the objectives of their use in the context of juvenile justice, together with a number of recommendations for their correct use. Naturally the most comprehensive description will be made of the group of specialised tests for criminological and forensic use, because these are newer.

Paradoxically, despite the importance of the assessment of psychological constructs in juvenile offenders (Grisso,

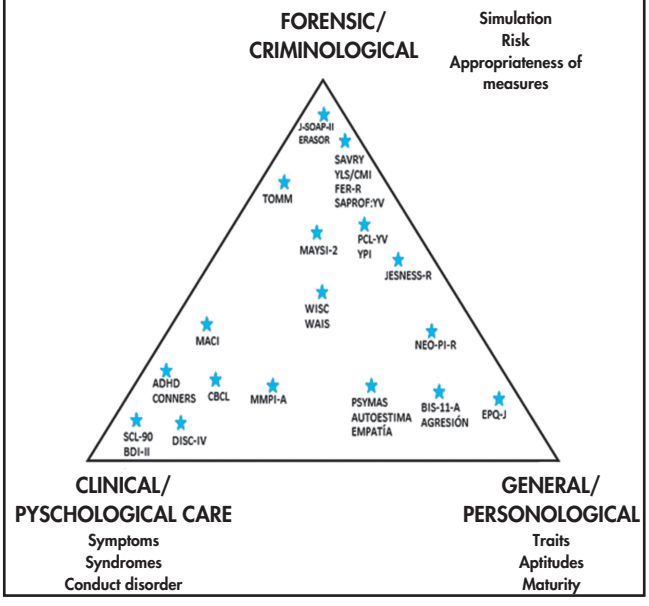
1998; Hoge, 2012), no such reviews have been published in Spanish (Latin America or countries with Hispanic minorities) that describe the tests and other psychological instruments. We hope that this review – which is necessarily summarised and schematic – will enable professionals to know which tools are available today to address the assessment needs demanded by the legal professionals in the framework of juvenile justice services.

Psychological tests have a well-known spectrum of technical possibilities which represent an important variety of procedures: interviews, observations and behavioural records (or similar), objective and performance tests and self-reports and rating scales. These procedures have their particular adaptations that deal with variables such as age and other personal circumstances specific to adolescents and the forensic context. In addition to these variations in the resources of psychological evaluation in the forensic and criminological field, the fit between the demands made of psychologists and the nature of the tests should be analysed. Thus we understand that in the forensic area when the demands are concentrated on understanding capabilities (intelligence, attention, reading fluency, etc.), dispositional traits and other psychological attributes (extroversion, impulsivity, self-esteem, leadership, etc.), one can use "personological" tests, as they are appropriate to this demand. For the demands that require knowledge of the individual reality of the adolescent with regards to the moment, the level of maturity and the development deserve special mention, these assessments remain in the field of general test, with tests being used such as the BASC (Reynolds, Kamphaus, & González Marqués, 2004) or the SENA (Fernández-Pinto, Santamaría, Sánchez-Sánchez, Carrasco, & Del Barrio, 2015) that can be used in school or clinical settings as well as forensic ones. Second, if the demands made of psychologists refer to the states and clinical situations of the adolescent -more or less transitory- then it is appropriate to use the huge plethora of techniques and procedures in this field, from the multiple scales of detection and diagnosis of psychopathological syndromes in adolescents such as the Conners Scales (Amador-Campos, Idiazabal-Alecha, Sangorrín-García, Espadaler-Gamissans, & Forns i Santacana, 2002; Conners, 2008) for ADHD- to the more specific follow-up tests and evaluation of specific symptoms or disorders (such as anxiety, depression, or adjustment disorders). Neuropsychological examinations such as NEPSY-II (Korkman, Kirk, & Kemp, 2014) can also be incorporated here. These give us knowledge of a spectrum of brain disorders with major impact on the antisocial behaviour of adolescents. All these tests are grouped under the heading of clinical tests, and although they were not initially designed for forensic contexts, they are commonly used and, bearing in mind their limitations, they are appropriate for forensic practice in juvenile justice. Finally the third group, specifically the forensic and criminological tests, assigned to this group for a combination of three reasons: a) they have been designed to assess specific constructs such as the risk of recidivism or psychopathy, b) they take into account the possible intentional and distorting manipulation on the part of the subjects being evaluated, involved in the majority use of evaluation procedures, and c) the situation of stress and imbalance of the adolescent subject to court rules and proceedings (Archer et al, 2013; Echeburúa et al, 2011; Esbec & Gómez-Jarabo, 2000; Grisso, 1998; Otto & Heilbrun, 2002). The combination of these requirements has led to what we can consider specifically forensic tests.

Considering the three types of tests and assessment tools, and their degree of specificity for use in professional contexts of juvenile justice, we can depict them on a graph with three vertices: forensic, clinical and personological. In this space, according to their professional suitability, the tests can be located in one place or another, closer to or further away from the three vertices of the triangle. Figure 1 shows this distribution and identifies the tests that will be covered below.

Another point of relevance in the use of psychological

FIGURE 1
REPRESENTATION OF PSYCHOLOGICAL TESTS ACCORDING TO ORIGIN



tests relates to their availability and ease of access, especially when one wishes to access their Spanish versions. We understand that psychological tests are distributed, firstly, through commercial, publishing and distribution companies such as TEA Ediciones, Pearson and others that today can be obtained in virtually any country - and very quickly - thanks to their distribution via the Internet, such as the international distribution companies PAR or MHS, who although they market their materials in English also sometimes have versions suitable for Hispanic populations which may be useful. In addition to these commercial circuits, there are additional resources that one can turn to when searching for evaluation materials, on the one hand we refer to the youth justice services of certain governments or states that have developed their own instruments, such as the Youth Justice Board of England and Wales, or also to laboratories, groups and research teams specialised on the topic of juvenile justice (and similar) from universities or consortia that promote or build specific tools for use in this field, for example, the case of MAYSI -2 (Grisso, Barnum, Fletcher, Cauffman, & Peuschold, 2001) and its development in the European Union through the international research network Inforsana. Finally, another way of accessing original versions or adaptations to Spanish of tests is via their publication in specialist journals.

"PERSONOLOGICAL" ASSESSMENT TESTS

This refers to all generic tests developed to evaluate psychological constructs of general interest in the different areas of applied psychology (school, work, clinical, organisational, legal or community). We have called these tests "personological" assessment tests because we wish to highlight their usefulness in evaluating traits, aptitudes, competences, abilities and even general attitudes. In this type of evaluation the main formats are self-report tests that are interested, notably, in the most stable and reliable psychological characteristics that we can evaluate considering the psychological individuation of adolescents. This group includes intelligence tests and those of other similar skills, tests of traits and personality types, competencies and abilities as well as neuropsychological[1] type tests, although the latter could occupy their own space among the clinical type tests. For the area of juvenile justice there are a number of generic tests that are useful and relevant, particularly those that allow us to cater to direct or indirect assessment demands aimed at determining the competencies of the adolescent in the judicial context, their basic mental abilities and their basic personality structure. The "personological" tests are useful in the context of juvenile justice, but it must be borne in mind that they must be adjusted to the peculiarities characteristic of adolescents, as individuals developing and in transition to adulthood, and that most of these tests tend to be assessment batteries (eg. Weschler scales) or multi-trait tests (e.g., NEO-PI-R), but there are also single-trait tests, such as the Basic Scale of Empathy (Jolliffe & Farrington, 2006) or the Barratt Impulsiveness Scale or BIS (Patton, Stanford & Barratt, 1995). Here we review some of these generic assessment tools for use in juvenile justice.

The importance of the evaluation of intelligence and cognitive abilities is well known in this field of juvenile justice because of the role of this psychological characteristic in terms of guilt, as well as the susceptibility of treatment and change in adolescent offenders. The Wechsler scales are the instruments most used in evaluations conducted by forensic psychologists (Archer et al, 2013; Borum & Grisso, 1995, Viljoen, McLachlan, & Vincent, 2010) and were designed to assess general intelligence, naturally including relevant information on different intellectual capabilities. But they have also demonstrated their relevance in auxiliary and additional assessment in psychiatric diagnoses, since aspects such as brain damage, psychotic impairment and emotional problems can affect some specific intellectual functions (Anastasi & Urbina, 1998). Because of the overlap in age limits on the adolescent and adult Wechsler scales in relation to our interest group, we will briefly review the characteristics of both scales. The Wechsler Intelligence Scale for Children IV or WISC-IV (Wechsler & Corral, 2011; Wechsler, 2003), developed for children and adolescents from years 6 years O months to 16 years 11 months, consists of a total of 15 tests (10 main and 5 elective). It provides a measure of total IQ (an estimate of the overall intellectual capacity), plus four more specific composite scores: the Verbal Comprehension Index, assessing crystallised intelligence which represents the ability to reason with previously learned information; the Perceptual Reasoning Index, a measure of fluid reasoning and visual processing; the Working Memory Index, a measure of short-term memory; and the Processing Speed Index, which represents the ability to perform simple tasks (Flanagan, Kaufman, & Seisdedos Cubero, 2006). The Wechsler Adult Intelligence Scale III or WAIS III (Wechsler, 2001) measures general verbal and non-verbal intelligence, through its Verbal scale, composed of the Verbal Comprehension and Working Memory factors;

[1] These are not dealt with in the article due to their high degree of specificity which restricts their use, but does not overrule it, to demands of this nature.

and its Performance scale, composed of the factors Perceptual Organization and Processing Speed; which together produce the Full Scale IQ Score. The WAIS III consists of 11 different tests, organised in the two scales already mentioned, and it takes an average of 60 to 90 minutes to complete. The age range for its application is between 16 and 89 years (Kaufman & Lichtenberger, 2002). In light of these findings, if cognitive development involves the maturation process of mental and intellectual functions such as memory, information processing or reasoning, which together allow adolescents not only to acquire new knowledge but also new ways to understand and interact in the world (Borum & Verhaagen, 2006), the assessment of cognitive ability in adolescents is justified to be carried out in forensic contexts, where the main uses of the Wechsler scales are associated with determining the skills that allow them to cope with the judicial process and adjusting treatment to their cognitive

TABLE 1
PERSONOLOGICAL EVALUATION TESTS

Clinical Instrument	Original Authors	Adaptations in Spanish	Objective	Age range
Wechsler Intelligence Scale for Children IV or WISC-IV	Wechsler (2003)	Wechsler and Corral (2011)	Cognitive abilities, gives a general measure of intelligence (IQ)	6 years 0 months to 16 years 11 months
Wechsler Adult Intelligence Scale III or WAIS III	Wechsler (2001)	Wechsler (2001)	Cognitive abilities, gives a general measure of intelligence (IQ)	16 - 89 years
Test of Memory Malingering or TOMM	Tombaugh (1996)	Vilar-López, Pérez and Puente (2012)	Simulation	Adolescents and adults
NEO-PI	Costa and McCrae (1992)	Costa et al. (2008)	Personality assessment	16 and over
Eysenck Personality Questionnaire - Revised (EPQ-R)	Eysenck and Eysenck (1991)	Spain: Eysenck et al. (2001)	To measure the dimensions of personality proposed by Eysenck through the scales of Neuroticism, Extraversion and Psychoticism	16-70 years
Eysenck Personality Questionnaire - Junior (EPQ-J)	Eysenck and Eysenck (1978)	Spain: Eysenck et al. (1992)	Three basic personality dimensions, like the EPQ-R. Antisocial Behavior scale	8-15 years
Cuestionario de Madurez Psicológica [Questionnaire of Psychological Maturity] (PSYMAS)	Morales-Vives et al. (2012)	Original version in Spanish	Psychological maturity	15 -18 years
Rosenberg Self-Esteem Scale	Rosenberg (1973)	Spain: Atienza et al., (2000); Martín-Albo et al. (2007); Argentina: Gongora and Casullo, (2009); Gongora et al., (2010); Chile: Rojas-Barahona et al. (2009)	Self-esteem	12 years onwards
Basic Empathy Scale (BES)	Jolliffe and Farrington (2006)	Oliva et al. (2011)	Emotional and cognitive empathy	12-17 years
Interpersonal Reactivity Index (IRI)	Davis (1980)	Mestre et al. (2004)	Emotional and cognitive empathy	13-18 years
Test de Empatía Cognitiva y Afectiva [Cognitive and Affective Empathy Test] (TECA)	López-Pérez et al. (2008)	Original version in Spanish	Affective and cognitive empathy	16 and over
Barratt Impulsiveness Scale (BIS)	Patton et al (1995)	Chile: Salvo and Castro (2013). Spain: Martínez-Loredo et al. (2015)	Impulsiveness	Adolescents and adults
Aggression Questionnaire by Buss and Perry	Buss and Perry (1992)	Spain: Andreu et al. (2002). El Salvador: Sierra and Gutiérrez (2007). Colombia: Chahín-Finch et al. (2012). Peru: Matalinares et al. (2012). Mexico: Pérez et al. (2013)	Aggression	Adolescents and adults

abilities (Grisso & Underwood, 2004; Grisso, 1998). As for its weaknesses, it is a test that takes a long time to be administered, and when there are suspected neuropsychological disorders, the person responsible for conducting the evaluation must have experience in the area or consult an expert (Roesch, Viljoen, & Hui, 1997).

With regards to the neuropsychological instruments that are useful in juvenile justice, we could present many of these, because these tests are very diverse and heterogeneous. They are specifically recommended when, in the case of adolescents, either due to their general physical or mental condition –a result of their evolutionary course or isolated incidents– they have evidence of brain damage, sequelae of intoxication or signs of degenerative diseases of genetic origin or acquired. Such assessments are halfway between clinical and generic assessments, but they should always be considered after anamnesis or if due to indirect knowledge of the adolescent one aims to examine mechanisms or neuropsychological processes in great depth (selective attention, short term memory, etc.). However a new protocol, partially neuropsychological in nature and used in the forensic context (especially with adults when there is probable brain damage of an accidental or organic nature) is the Test of Memory Malingering or TOMM (Tombaugh, 1996). This is a memory test of visual recognition that allows us to distinguish between subjects that are simulating memory problems and those who really are suffering from these types of problem. The author states that the ability to detect simulation (deception or exaggeration) in memory problems is relevant in cognitive assessment, as impairment may be associated with a wide range of organic-based damage. Its usefulness is based on the fact that memory image recognition is a skill that shows a low rate of involvement in healthy people and in various neurological disorders (Rees & Tombaugh, 1998). The test consists of 50 items of individual application and requires an administration time of 15 to 20 minutes. It can be used with adolescents and adults, people with low education levels and from different cultures (Tombaugh, 1996) and there is an adaptation for use in Spain by Vilar-López, Pérez & Puente (2012).

One of the more general demands, and more unspecific in a forensic sense, concerns the psycho-legal questions related to the personality traits of the juvenile offender and the possible link with both criminal behaviour and their adaptive capacity. This demand is sometimes explicit, when asked to describe the "personality or psychological profile" of an adolescent offender, but at other times it is implicit when trying to describe the strengths and weaknesses of an adolescent in order to report on the accused, to design a program intervention or to predict the immediate future of the case. Unlike the assessment of cognitive abilities, personality assessment using tests did not reach a level of widespread acceptance until about 20 years ago. This change was produced by the creation of the Big Five traits model and the revitalisation of classic tests such as the 16PF or EPQ (Morizot, 2015). This change has made it easier for psychology professionals to have new tools for personality assessment such as the NEO PI-R (Costa & McCrae, 1992), and the ZKPQ (Zuckerman, 2002) among others.

The assessment of personality traits in the context of intervention with juvenile offenders becomes especially relevant with regards to the alleged relationship these traits have with antisocial behaviour. According to Morizot (2015) there are three types of classical theories that establish explanatory relationships between personality and crime, the first indicates that personality traits are descriptive variables that allow us to differentiate, for example, between criminals and non-criminals; others point out that personality traits may influence the decision to commit a crime or not; and finally, there are those where the characteristics include predispositions that emerge early (i.e., temperament) and have a direct or indirect explanatory influence on the onset of criminal behaviour, i.e., personality seen as a risk factor. A more current conceptual model is that of remission and desisting, which considers the impact of changes in personality traits in the processes of withdrawing from crime, which could be considered as maturity of personality. This means considering the role of personality in a more dynamic way and not just as an initiator or maintainer/aggravator of criminal behaviour (Blonigen, 2010; Morizot, 2015). In any case the usefulness of personality assessment, understood as a stable set of characteristics and temperamental and characterological dispositions (Andrés-Pueyo, 1997), is to have a pattern of the stable and consistent structure of individual characteristics that affect conduct which is fairly permanent and predetermined in the adolescent under evaluation. Below we will describe several multifactorial instruments such as the NEO-PI-R, the EPQ-J and PSYMAS, among others, which are broad and well-established tools for evaluating personality and psychological maturity.

The NEO PI-R (Costa & McCrae, 1992) is one of the most well-known tests assessing normal personality and it is also one of the most used around the world today. It provides an estimate of the five major dimensions of personality, also known as the "big five" factors, plus a set of 30 facets, which as a whole provide us with a profile of characteristics (some more generic and others

more specific) and offer a comprehensive view of the adult personality, and also to a certain extent that of adolescents (De Fruyt, Mervielde, Hoekstra, & Rolland, 2000). The test can be applied individually or collectively, with an average administration time of 40 minutes, applicable from the age of 16 onwards. It consists of 240 items that are answered on a Likert scale of five options, through which it measures the Extraversion scale assessing positive emotionality; Agreeableness relating to interpersonal relationships; the Conscientiousness scale related to impulse control; Neuroticism referring to negative emotionality and Openness to Experience, which relates to the interest in culture and preference for novelty. In turn, each of these traits are subdivided into six facets that enrich the configuration of relevant individual differences. These 30 factors provide us with an individual profile for each person evaluated which is extremely useful in application (for details see Costa & McCrae, 1992). The NEO PI-R has weightings available for Spain, Colombia, Costa Rica and Guatemala (Costa et al., 2008). In addition, there is a newer version, called NEO PI-3 (McCrae, Costa, Jr., & Martin, 2005), which can be used with subjects from the age of 12 years onwards. The commercial version is still only available in English, but there are adaptations to Spanish in the self-report version with samples from Peru, Puerto Rico, Argentina and Chile (De Fruyt, De Bolle, McCrae, Terracciano, & Costa, 2009), and its version written in the third person (to be answered by others who know the subject under evaluation) adapted in Argentina (Leibovich & Schmidt, 2006).

Another well-known self-report instrument for assessing personality is the Eysenck Personality Questionnaire - Revised or EPQ-R (H. Eysenck & Eysenck, 1991). This consists of 100 items with dichotomous (yes/no) responses that measure three dimensions of personality proposed by Eysenck, through its scales Neuroticism, Extraversion and Psychoticism. It also has a control scale called the Lie scale. The age range for use is 16 to 70 years (H. Eysenck, Eysenck, Ortet i Fabregat, & Seisdedos Cubero, 2001). This questionnaire has been translated, adapted and validated in 39 countries (H. Eysenck et al., 2001; H. Eysenck, Eysenck, Seisdedos Cubero, & Cordero, 1992; S. Eysenck & Barrett, 2013). There is also a version for teenagers called EPQ-Junior (H. Eysenck et al., 1992), applicable for the age range between 8 and 15 years and requiring approximately 20 minutes to administer. In its 81 items it evaluates, like the EPQ-R, the three basic personality dimensions together with the control scale. In addition, the junior version includes a scale consisting of items of the 3 personality scales called Antisocial Behaviour, which evaluates the propensity for Antisocial Behaviour. In Spain, the EPQ-J has been adapted and validated and it has standards that facilitate its use, however, the Antisocial Behaviour scale requires further development and the current version is not recommended for diagnostic purposes (H. Eysenck et al., 1992). In specific studies with the adolescent population, it has been observed that during this period anti-social behaviour is related to higher Psychoticism, whereas in emerging adulthood the relationship with Psychoticism is presented as a predictor only in cases of serious criminal acts (Heaven, Newbury, & Wilson, 2004).

In addition to the multi-trait personality questionnaires, as we have said before, there are also what are known as "single-trait" tests, which generally evaluate one particular trait, such as self-esteem or aggressiveness, briefly, as they usually contain between 15 and 30 items. The administration is very quick (five to ten minutes). There are several single-trait scales that may be of interest in the field of juvenile justice, but due to the length restrictions of this review we have chosen the most commonly used ones for the relevant constructs in the area. One of the most used is the Rosenberg Self-Esteem Scale (1973), a concept that the author defines as an evaluative attitude that a person has towards themselves, or the affective component of the attitude towards oneself. It consists of 10 items focused on feelings of self-respect and self-acceptance, which are answered in Likert format. The scale can be administered individually or collectively with adolescents from the age of 12 years onwards, with an average time of 5 minutes. It has adaptations for the adolescent and adult population in countries such as Spain (Atienza, Moreno, & Balaguer, 2000; Martín-Albo, Núñez, Navarro, Grijalvo, & Navascués, 2007), Argentina (Gongora & Casullo, 2009; Góngora, Fernandez, & Castro, 2010) and Chile (Rojas-Barahona, Zegers, & Forster, 2009), with weightings for interpretation, differentiated by age and sex, developed in a Spanish adolescent population (Oliva, Hernández, & Antolín, 2011).

Another interesting characteristic to evaluate in the context of juvenile justice is empathy (Jolliffe & Farrington, 2004), which has been described, for example, as being related to the inclination to prosocial attitudes and having an inhibitory function in relation to aggressiveness (Mestre, Frías, & Samper, 2004). There are various scales that have been constructed for this purpose, such as the Basic Empathy Scale (BES), a self-report of 20 items in Likert format developed by Jolliffe and Farrington (2006) which includes a measure of global empathy, plus two independent measures of cognitive empathy (perception and understanding of others) and affective empathy (emotional reaction caused by the feelings of other

people). This scale has a version adapted to the Spanish population between the ages of 12 and 17 years by Oliva et al. (2011) which, after filtering the original items, was finally established with 9 items, maintaining the composition of the score (global, affective and cognitive empathy). This adaptation is administered in 5 minutes and is weighted in percentiles by age and sex, as there is evidence of gender differences in the measurement of empathy. Specifically women obtain higher scores on empathy (Jolliffe & Farrington, 2006; Mestre et al., 2004). Another single-trait self-report scale is the Interpersonal Reactivity Index or IRI (Davis, 1980) which measures empathy multi-dimensionally, through 28 items divided into the following subscales: Perspective taking, Fantasy, Empathic concern and Personal Distress. This allows us to measure both cognitive and emotional aspects of empathy. The IRI is one of the most widely used instruments for measuring empathy, with an adaptation and validation in Spanish population with adolescents of both sexes aged between 13 and 18 (Mestre et al., 2004). A final test worth mentioning is the *Test de Empatía Cognitiva y Afectiva* or TECA (López-Pérez, Fernández-Pinto, & Abad, 2008), because it is the only published assessment tool for empathy. It is composed of 33 items with a Likert type scale, rapid administration (5 to 10 minutes) and it measures empathic capacity from a cognitive and emotional approach, offering an overall score of empathy and four specific scales: Adopting Perspectives, Emotional Understanding, Empathic Stress and Empathic Joy. It has weighting scales for the general Spanish population differentiated by gender, from 16 years onwards.

For the evaluation of impulsivity we have the BIS (Partan et al., 1995), one of the most used self-report instruments in both the clinical and research fields for this construct. There are several versions of the scale, the most current being the BIS-11-A (adolescents), with adaptations to Spanish in Chile (Salvo & Castro, 2013) and Spain (Martínez-Loredo, Fernández-Hermida, Fernández-Artamendi, Carballo & Garcia-Rodríguez, 2015). The BIS-11-A, like the adult version, has 30 Likert items through which subjects must report the frequency of different behaviours, producing an overall score of impulsivity, and three sub-scores of attentional impulsivity, motor impulsivity and nonplanning. The BIS-11 has shown a high predictive value for assessing risk behaviours, such as symptoms of conduct disorder, attention deficit disorder, substance use and suicide attempts (Salvo & Castro, 2013; Stanford et al, 2009; Von Diemen, Szobot, Kessler, & Pechansky, 2007)

Finally the Aggression Questionnaire by Buss and Perry (1992), evaluates Aggression and other related constructs. It consists of 29 items, in a 5-point Likert format that provides a total score of Aggression, as well as 4 subscale scores: Physical Aggression and Verbal Aggression, both measuring the motor component of aggression by which subjects injure or harm others. The Anger subscale assesses psychological activation and preparation for aggression, representing the emotional component of behaviour and the Hostility subscale measures feelings of suspicion and injustice, representing the cognitive component of aggression. The Aggression Questionnaire is a tool that is easy to use and has a low administration cost, which makes it effective in detecting aggressive subjects in the general population (Andreu Rodríguez, Peña & Grana, 2002). It has been adapted to the Spanish population by Andreu, Peña and Graña (2002), and it also has adaptations for different Latin American countries such as El Salvador (Sierra & Gutiérrez, 2007), Colombia (Chahín-Pinzon, Lorenzo-Seva, & Vigil-Colet, 2012), Peru (Matalinares et al., 2012) and Mexico (Pérez, Ortega, Rincón, García & Romero, 2013).

Before finishing this section, which could be very long because there are many generic and personological tests that could be used in juvenile justice (K-ABC, DAS, ZKAPQ, 16PF-APQ, etc.), we think it is of great interest to present a novelty which, although it was not specifically created for forensic or criminological contexts, will be very useful. We are referring to the first questionnaire to assess psychological maturity in adolescents by self-report which was constructed using the most advanced up-to-date psychometric techniques of TCT. It is called the Psychological Maturity Questionnaire or PSYMAS (Morales-Vives, Camps, & Lorenzo-Seva, 2012) and it was recently published in Spain by Ediciones TEA. The PSYMAS is a measure of psychological maturity in adolescents, defined as the ability to assume obligations and make decisions responsibly, taking personal needs and characteristics into consideration, and considering the consequences of their actions. It is aimed at adolescents between the ages of 15 and 18, and can be administered individually or collectively, with an average duration of 10 minutes. It consists of 26 items that are organised across three scales of 7 items each: Orientation to Work, which in high scores indicates that the teenager takes responsibility for their obligations; Autonomy, which characterises adolescents capable of making their own decisions, without excessive dependence on others, and also the ability to take initiative; and the Identity scale, indicating teenagers who have good self-knowledge. The total score of the test yields a measure called Psychological Maturity, which reports on the overall level of maturity of the adolescent. Finally, the PSYMAS

contains 4 items assessing Social Desirability and Acquiescence, plus a test item at the beginning of the test. This instrument was developed in Spain and has standards for use with adolescents between 15 and 18 years of age (Morales-Vives et al, 2012; Morales-Vives, Camps, & Lorenzo-Seva, 2013). In a study using PSYMAS with a sample of students aged between 14 and 18 years of both sexes, links were found between psychological maturity and aggressiveness, whereby a lower psychological maturity has greater indicators of indirect aggression, especially in males. In addition, the biggest predictor of indirect aggression is the Autonomy scale, and that of direct aggression is the Identity scale (Morales-Vives, Camps, Lorenzo-Seva, & Vigil-Colet, 2014). Currently the authors of PSYMAS, in conjunction with the authors of this study, are working on a forensic version specifically for application in the context of legal psychology.

Finally, it is worth briefly mentioning in this section what are known as projective tests, defined as those whose assessment is based on people's reactions to different unstructured stimuli, examples being the Thematic Apperception Test (Murray & Bernstein, 1977) or the Rorschach Test. This type of test can also be of use in child and adolescent forensic psychological evaluation, as its main strength is that it enables an assessment in which is difficult to manipulate the response (Anastasi & Urbina, 1998), which is a serious problem in self-report evaluations in criminal and legal contexts in general. However, a number of criticisms of these assessment techniques are well known, including the observation that projective tests incorporate very complex interpretations, so they require great knowledge and experience in the test by the person who administers it, which implies the possibility of concluding erroneously from careless interpretations when these techniques are used by professionals without the necessary qualifications (Manzanero, 2009). Yet it is usually recommended that they are not used on their own in forensic examination, and in applying any projective technique, it must be as a supplement to another test of psychometric origin (Echeburúa et al, 2011; Manzanero, 2009).

PSYCHOLOGICAL TESTS FOR CLINICAL ASSESSMENT

The instruments of clinical nature guide the interpretation of their results to a symptomatic psychopathological type reading and are naturally of great interest in the field of juvenile justice, both because of the relevance that psychological disorders may have in the adolescents offenders with regards to criminal responsibility, and also because of the importance they have in the re-education process, although the disorders do not affect the core of criminal responsibility, but rather the welfare and integrity of the development of these adolescents (Grisso, 2005). It is well proven that the prevalence rates of mental disorders in adolescents who are attended by the juvenile justice services are very high, reaching up to 65% of cases (Cocozza & Schufelt, 2006; Fazel, Doll, and Långström, 2008) and this alone is sufficient reason to use these clinical instruments.

It is hard to choose what to include in this section because of the huge amount of such instruments that exist today (Muñoz, Roa, Pérez, Santos-Olmo, & De Vicente, 2002; Schlueter, Carlson, Geisinger, & Murphy, 2013) also because the choice will depend on the approach and consideration of the professional and the demands received in the particular case (and even the moment in time) of the adolescent offender under evaluation. First we will review one of the best known and most studied clinical tools for evaluating psychopathological aspects through self-report, the adolescent version of the Minnesota Multiphasic Personality Inventory-Adolescent or MMPI-A (Butcher et al., 1992) (Butcher, Jiménez Gómez, & Avila Espada, 2003). Afterwards we will analyse the Millon Adolescent Clinical Inventory or MACI (Millon, 1993), another self-report tool widely available in clinical settings with adolescents. Next we review two diagnostic tools widely used in clinical evaluations and the prevalence of mental health in childhood and adolescence, the Diagnostic Interview Schedule for Children-IV or DISC-IV (Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000) and the Child Behavior Checklist, or CBCL (Achenbach & Edelbrock, 1983). Finally, a number of assessment scales that address the specific and relevant clinical symptoms in juvenile justice will be described, such as the Symptoms Checklist 90 Revised or SCL-90-R (Derogatis, 1977), the Beck Depression Inventory II or BDI-II (Beck, Steer, & Brown, 2006) and two scales to assess attention deficit hyperactivity disorder (ADHD), the ADHD Rating Scale-IV (DuPaul et al., 1997, 1998) and the Conners scales (Conners, 2008).

The MMPI-A (Butcher et al., 1992) is designed for administration to adolescents between 14 and 18 years of age and evaluates clinical and psychopathological aspects of personality. It was developed for use in various clinical settings, especially with psychiatric patients and those receiving treatment for drug and/or alcohol abuse, and it aims to establish a baseline of the adolescent's mental health prior to starting treatment. It can also be used to assess the impact of treatment on psychological changes in a short period of time (Archer, Zoby, & Vauter, 2006). It consists of 478 dichotomous response items (true/false) and has numerous validity scales, clinical scales, and complementary content. It requires an

average delivery time of between 60 and 90 minutes, however, in forensic science groups such as juvenile justice, the youngsters do not always have the cognitive skills or the minimum reading capacity required to complete this test acceptably (Archer & Krishnamurthy, 2002 in Archer et al., 2006). In surveys of psychologists who carry out evaluations in forensic contexts, the MMPI-A is one of the most frequently used self-report assessment instruments (Archer, Buffington-Vollum, Stredny, & Richard, 2010), especially with adolescents in youth justice (Archer et al., 2006, Viljoen et al., 2010), where its uses vary depending on the moment in the judicial process (Grisso, 1998). Among the advantages of using the MMPI-A in forensic contexts, it must be noted that it has had adaptation and validation studies carried out in Spain, Mexico, Peru and Chile (Butcher et al., 2003; Lucio, Ampudia, & Durán, 1998; Scott & Mamani-Pampa, 2008; Vinet & Alarcón, 2003). It also provides relevant information related to emotional stress, problems with drug and/or alcohol use, family relationships and impulse control; in addition, the validity scales enable us to assess the credibility of the answers given by the adolescent (Archer et al., 2006). There are also indicators that suggest that it helps predict aggressive behaviour of adolescents in contexts of detention (Hicks, Rogers, & Cashel, 2000). It has been observed that the MMPI-A provides relevant updated information on the functioning of the adolescent, but it has limited ability to establish long-term diagnoses (Archer et al., 2006).

Another notable clinical evaluation instrument appropriate for assessing mental health and other psychological characteristics of juvenile offenders is the MACI developed by Millon (1993) based on his theory of psychological functioning. It was designed to assess personality characteristics and the balanced development of adolescents, the reaction to conflict situations typical of the adolescent phase and the possible presence of clinical symptoms of high prevalence in that stage of development, all evaluated by a self-report consisting of 160 items with true/false answers. It evaluates a total of 31 scales, of which 12 refer to Personality patterns, eight to Concerns Expressed and seven to Clinical Syndromes,

TABLE 2
PSYCHOLOGICAL TESTS AND ASSESSMENTS FOR CLINICAL EVALUATION

Clinical Instrument	Original Authors	Adaptations in Spanish	Objective	Age range
Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A)	Butcher et al. (1992)	Spain: Butcher et al. (2003). México: Lucio et al. (1998). Peru: Scott and Mamani-Pampa, (2008). Chile: Vinet and Alarcón (2003b)	Evaluates aspects of personality and psychopathology	14-18 years
Millon Adolescent Clinical Inventory (MACI)	Millon (1993)	Argentina: Casullo et al. (1998). Spain: Millon and Llagostera Aguirre (2004). Chile: Vinet and Forns (2008).	Evaluation of personality characteristics, conflicting own adolescent period and clinical symptoms	13-18 years
Diagnostic Interview Schedule for Children-IV (DISC-IV)	Shaffer et al. (2000)	Spanish version by the original authors.	Evaluation of more than 30 psychiatric disorders occurring in childhood and adolescence	6-17 years
The Child Behavior Checklist (CBCL)	Achenbach and Edelbrock (1983)	Spanish version by the original authors.	To record the behavioural problems and social skills of children and adolescents	4-18 years
Youth Self-Report, YSR	Achenbach (1991b)	To register behavioural problems and social skills, self-report version for adolescents	Spain: Abad et al. (2000); Lemos-Giráldez et al. (2002).	11-18 years
Symptoms Checklist 90 Revised (SCL-90-R)	Derogatis (1977)	Spain: Derogatis and González de Rivera y Revuelta, (2002)	Psychopathological or psychosomatic disorders across 9 dimensions	13 years and older
Beck Depression Inventory II (BDI-II)	Beck et al. (2006)	Chile: Melipillán et al. (2008). Spain: Sanz et al. (2014).	To detect and assess the severity of depression	13 years and older
ADHD Rating Scale-IV	DuPaul et al. (1997, 1998)	Spain: Servera and Cardo (2007).	Screening for ADHD	5-18 years
Conners scales	Conners (2008)	Spain: Amador-Campos et al. (2003); Amador-Campos et al. (2002).	Screening for ADHD. Changes resulting from treatment	6-18 years

as well as three Modifying Scales. The average administration time is usually 30 to 45 minutes. It is considered the second most commonly used self-report instrument with adolescents in North America (Archer et al., 2010) and is one of the tools most commonly used by psychologists in Spain (Muñiz & Fernández-Hermida, 2010). In 2007 a third of the publications of the MACI were in the forensic area, with special emphasis on juvenile justice samples (Baum, Archer, Forbey, & Handel, 2009). It has been validated and adapted for different countries such as Spain, Argentina and Chile (Casullo, Góngora, & Castro, 1998; Millon & Aguirre Llagostera, 2004; Vinet & Forns, 2008). The strengths of the MACI include its relatively brief composition of items, as well as the potential to be an alternative or complementary instrument to the MMPI-A in the assessment of psychopathology, given the volume of scientific research that supports it (Baum et al., 2009).

An interesting peculiarity of the MACI for use in juvenile justice is its ability to indirectly assess psychopathy. Murrie and Cornell's team (2000) developed a scale to assess psychopathy using 20 items of the MACI. The scale is called the Psychopathy Content Scale or PCS, and good psychometric results have been obtained to support its use, indicating that the MACI is a useful screening tool for detecting psychopathic traits in adolescents, and high scores identify the need for further evaluation in this area. Later Salekin, Ziegler, Larrea, Anthony and Bennett (2003) developed another scale of psychopathy consisting of 16 items of the MACI, called Psychopathy-16 items or P-16, which has a good ability to predict general and violent recidivism as a full scale, and indicators of antisocial behaviour and callousness/insensitivity, which are relevant in assessing psychopathy in adolescents. There are complementary studies on both the PCS and P-16 in adolescents with behavioural problems (Penney, Moretti, & Da Silva, 2008) and exploratory studies with Chilean samples (León-Mayer & Zúñiga, 2012, Zúñiga, Vinet, & León, 2011).

Another protocol of great interest and used in diagnostic tasks of psychologists in juvenile justice is the DISC-IV (Shaffer et al., 2000), a diagnostic tool based on a semi-structured interview for use by non-clinical practitioners based on the DSM-IV and ICD-10, which enables the evaluation of more than 30 psychiatric disorders occurring in childhood and adolescence. It was developed in 1997, however, the first versions of the DISC began in 1979, where its use was initially focused on epidemiological studies. Today the DISC has been used for clinical studies, prevention studies and as an aid to clinical diagnosis in mental healthcare centres. The DISC-IV questions are mostly "yes/no" answers and should be read verbatim by the interviewers, who require a training process that lasts between 2 and 3 days. It has versions in English and Spanish, developed by the authors. The administration time is around 70 minutes in the community population, and between 90 and 120 minutes in the clinical population (Shaffer et al., 2000). To complement it, other formats have been developed, among which the Voice DISC-IV is noteworthy, a structured self-report interview administered using a computer and headphones, which evaluates the same areas as the traditional DISC-IV (Grisso & Underwood, 2004; Shaffer et al., 2000). Important advantages are observed in using the Voice DISC-IV in juvenile justice systems as it minimises the need for professionals or technicians in the evaluation, the scores can be obtained immediately generating a tentative diagnosis based on the DSM-IV, and the privacy involved when answering the interview encourages greater openness to the test on the part of the teenager (Wasserman, Ko, & Mcreynolds, 2004).

Another classic protocol on child and adolescent assessment that is useful in juvenile justice is the CBCL (Achenbach & Edelbrock, 1983), which aims to record behavioural problems and social skills in children and adolescents between 4 and 18 years based on reports provided by their parents across 120 items on a 3 point Likert response scale, focusing on the experience of the last 6 months of the child or adolescent evaluated. It is used in both research and clinical settings, usually for screening in epidemiological studies (Abal et al., 2010). Complementarily forms have been developed to be completed by teachers –the Teacher's Report Form, TRF- (Achenbach, 1991a) and the self-report version for adolescents –the Youth Self-Report, YSR- (Achenbach, 1991b). Currently, all variants of the instrument are part of a multi-informant evaluation system called the Achenbach System of Empirically Based Assessment - ASEBA (Achenbach & Rescorla, 2001), which has been translated into 85 languages (Lacalle, 2009); and the self-report version has adaptations in Spain (Abad, Forns, Amador, & Martorell, 2000; Lemos-Giráldez, Vallejo-Seco, & Sandoval-Mena, 2002). Work in juvenile justice with these instruments is mainly centred on the CBCL and the YSR, which are among the instruments most commonly used in forensic contexts with children and adolescents (Archer et al., 2010), as well as in risk assessment with youths (Viljoen et al., 2010). Among the findings regarding their use in juvenile justice research, it should be noted that antisocial behaviour, measured by the Aggressive Behaviour and Antisocial Behaviour scales of the YSR, presents continuity in time after a two year follow-up with a community sample, and comorbidity with

depressive disorder, measured by the BDI (Ritakallio et al., 2008).

Regarding the scales of specific clinical symptoms, the SCL-90-R (Derogatis, 1977) is a self-report instrument of 90 items that describes psychopathological or psychosomatic disorders; the intensity of the suffering caused by each of the symptoms should be graded by the person who answers the test through a Likert scale of 5 points. In responding, people must refer to the recent weeks, including the day of administering the questionnaire. It is applied from the age of 13 onwards and the duration of administration is approximately 15 minutes. The SCL-90-R provides information in the form of the following nine symptom dimensions: Somatisation, Obsessive-compulsive, Interpersonal sensitivity, Depression, Anxiety, Hostility, Phobic anxiety, Paranoid ideation and Psychoticism. It also includes an additional scale that groups together heterogeneous symptoms of clinical relevance, which are indicators of the severity of the subject's condition, but do not constitute a specific symptom dimension. The SCL-90-R also has three global indices for the interpretation of the results: the Global Severity Index is a general measure of the intensity of global psychological and psychosomatic suffering of the subject; the Positive Symptom Total sums the total symptoms present, recognising the diversity of the psychopathology; and the Positive Symptom Distress Index is an indicator of the average symptomatic intensity that the teenager presents at the time of completing the test. The use of the SCL-90-R in the juvenile justice population has been suggested to evaluate the use of violence in adolescents, especially the Hostility scale (Dahlberg, Toal, Swahn, & Behrens, 2005) and it has an adaptation for the Spanish population (Derogatis & González de Rivera y Revuelta, 2002).

The BDI-11 (Beck et al., 2006) is a scale for evaluating specific symptoms relevant to contexts of juvenile justice, because of the accumulating evidence that points to depression as one of the mental disorders with greater presence in the prison population and especially in adolescent females, reaching a prevalence of 29% (Fazel et al., 2008). The BDI-11 is a self-report protocol consisting of 21 items of Likert type, describing the most common clinical symptoms of psychiatric patients with depression, such as sadness, crying, loss of pleasure, feelings of failure and guilt, and pessimism, among others. It is one of the most used instruments for detecting and assessing the severity of depression, and it is used clinically with adults and adolescents from the age of 13 years onwards. The BDI-11 can be administered individually or collectively, with a response time of 5 to 10 minutes. Subjects are asked to choose the most characteristic statements occurring over the last two weeks (Beck et al., 2006, Colegio Oficial de Psicólogos [Spanish Psychological Association], 2013). The BDI is one of the most used instruments by psychologists in Spain (Muñiz & Fernández-Hermida, 2010), it has various adaptations and validations in Europe and Latin America that support its use and show the wide reach of this test (Cunha, 2001; Dere et al, 2015; Melipillán, Cova, Rincon, & Valdivia, 2008; Sanz Gutiérrez, Gesteira, & García-Vera, 2014). Regarding the use of the BDI in forensic population, Archer, Buffington-Vollum, Stredny & Richard (2010) indicate that it is one of the most widely used clinical tests for adults in North America. The prevalence of depression, measured by the BDI-II, indicates that it is higher in the prison population than in the general population (Boothby & Durham, 1999), and this significant difference is replicated in studies comparing adolescent offenders and non-offenders (Regina, 2008; Ritakallio, Kaltiala-Heino, Kivivuori, & Rimpelä, 2005). Furthermore, between 65% and 70% of women prisoners and prisoners under 20 years obtain even higher scores on the BDI-II, in the range of mild to severe depression (Boothby & Durham, 1999), findings that suggest the need to establish cut-off scores and differential interpretation for the use of this instrument in the forensic population. Other studies have described specific cut-off scores to detect the risk of self-injury during incarceration using the BDI-II (Perry & Gilbody, 2009).

Finally we refer to ADHD and its relationship with antisocial behaviour. It is a much-discussed and controversial syndrome which is considered primarily neurobiological in origin and which begins in childhood, affecting between 3 and 7% of school-age children. It often reflects a performance below their capacities and the possible presence of emotional and behavioural disorders (American Psychiatric Association, 2001). It has been widely reported that the antisocial behaviour associated with the presence of hyperactivity and/or attention deficit disorder is characterised by a) an early onset - in early and middle childhood or, b) a strong association with dysfunctionality in social adaptation and deficits in peer relationships, c) a high probability of persistence and recurrence of antisocial behaviour in adulthood, d) an association with decreased cognitive abilities and deficits in academic performance and, finally, e) a strong genetics-based component (Rutter, Giller, & Hagell, 2000). The methodologies for assessing ADHD require information not only from the child or adolescent as the main informant, but also from the parents or caregivers and teachers about the symptoms, duration and degree of clinical impact of the ADHD. It is

therefore possible to use open-ended questions as well as semi-structured interviews, questionnaires or scales to structure the collection of information and the subsequent evaluation of the disorder (Ministerio de Sanidad [Spanish Ministry of Health], 2010). Among the tools for assessing ADHD some have already been mentioned in this section, such as the DISC IV and CBCL, which include this disorder within the clinical examinations they conduct. A specific scale for the assessment of ADHD in adolescents is the ADHD Rating Scale-IV (DuPaul et al., 1997, 1998), a screening scale consisting of 18 items on a Likert scale, each of which represents a symptom of ADHD according to the diagnostic criteria of the DSM-IV. As a result it provides two subscales (Inattentive and Hyperactive/Impulsive), and a total score. There are two versions, one to be administered to the parents and one for the teachers of children and adolescents aged 5 to 18 years. The version translated and validated in Spanish was developed by Servera and Cardo (2007) with children between the ages of 5 and 11 years.

A second instrument used widely is the Conners scales (Conners, 2008), which aims to carry out a screening of the symptoms of ADHD, and is also sensitive to changes caused by treatment. The scales can be used with children and adolescents between 6 and 18 years and it consists of two scales for parents, an extended version and an abbreviated one; two scales for teachers, extended and abbreviated; and a self-administered version for use with adolescents from the age of 8. Each extended scale includes items assessing general psychopathology, while the abbreviated versions are composed of four subscales: Oppositional, Inattention, Hyperactivity and ADHD index. There is a Spanish translated version by MHS (Conners, 2008) as well as population studies carried out with the Spanish version (Amador-Campos, Idiazabal, Aznar, & Peró, 2003; Amador-Campos et al, 2002).

In the second part of this work, in the next article, we present a series of tests and forensic psychological assessments available in Spanish for professionals in the general area of criminology. These tests and assessments address evaluations of key issues for case management in juvenile justice.

Notable among these is the assessment of psychopathy which is analysed by recognised instruments such as the Psychopathy Checklist: Youth Version (Forth, Kosson, & Hare, 2003), as well as a number of instruments assessing the risk of youth violence, such as the SAVRY (Borum, Bartel & Forth, 2003) and the Youth Level of Service/Case Management Inventory (Hoge & Andrews, 2002), among others. For each test the main characteristics are described as well as their use within the context of forensics.

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FORENSIC TESTS IN SPANISH FOR ASSESSING JUVENILE OFFENDERS

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Conocer de forma objetiva y rigurosa las características psicológicas individuales del adolescente infractor, tales como la inteligencia, los rasgos de personalidad así como otras de naturaleza clínica y criminológica, son fundamentales para la aplicación de las medidas judiciales y educativas propias del contexto de la justicia juvenil. Las herramientas de Personológicas y Clínicas descritas en el artículo anterior (Wenger & Andrés-Pueyo, xxxx) no son suficientes para atender a las necesidades criminogénicas de los adolescentes y y es preciso utilizar otras mucho más especificas. En el presente artículo se presentan una serie de instrumentos complementarios, desarrollados especialmente para el ámbito forense, que permiten realizar evaluaciones muy específicas, como por ejemplo, la valoración de riesgo de violencia o la evaluación de psicopatía. A continuación se describen pruebas y test psicológicos de tipo forense disponibles en español para profesionales del ámbito de la justicia juvenil.
Palabras clave: *Evaluación psicológica, Justicia juvenil, Personalidad, Clínica, Forense.*

Objectively and rigorously understanding the individual psychological characteristics of adolescent offenders, such as intelligence, personality traits and others of a clinical and criminological nature, is essential when developing appropriate processes for intervention in educational and judicial measures in the context of juvenile justice. However, the clinical and personological tools described in the previous article (Wenger & Andrés-Pueyo, 2016) are not enough to address the criminogenic needs of the adolescents and other, more specific, tools are needed. In this article, a number of complementary instruments developed specifically for the forensic area are reviewed. These tools enable us to carry out very specific assessments in this context, such as the evaluation of the risk of violence or the assessment of psychopathy. A review is also presented of the forensic psychological tests available in Spanish for professionals in the field of juvenile justice.
Key words: *Psychological assessment, Juvenile justice, Personality, Clinical, Forensic.*

In the first part of this publication (Wenger & Andrés-Pueyo, 2016), we describe a series of personological and clinical psychological tests, available in Spanish for use in the context of juvenile justice; from this review, we can appreciate a large body of available tools for professional practice which, when used for the appropriate purposes, are extremely useful for assessing and guiding the intervention processes with juvenile offenders. However, for working with this population there are several specific aspects of forensic evaluation that the tools described here do not cover, particularly for the evaluation of the relevant psychological variables in working with the juvenile justice population, such as violence risk assessment, either general or specific (e.g., risk of sexual violence) or the assessment of psychopathic traits in adolescents. For these specific aspects, instruments have been developed specifically for use in forensic and criminological contexts, so this article focuses on describing the main psychological tests of forensic evaluation used in juvenile justice, available for Spanish-speaking populations.

The last twenty-five years have been very productive, as new technologies have been created, such as those for the risk assessment of violence and recidivism (Dematteo, Wolbransky, & Laduke, 2016), that have facilitated the efficient approach to forensic and criminological tasks which were previously dealt with rather unsystematically (Andrés-Pueyo & Redondo, 2007). Thus, in this article the forensic tools for use in juvenile justice contexts will be presented, such as the Jesness Inventory - Revised or JI-R (Jesness, 2004), a personality instrument designed for working with adolescents in justice, the Massachusetts Youth Screening Instrument 2 or MAYSI-2 (Grisso & Barnum, 1998) which addresses the mental health needs of this group, as well as the main tools for assessing adolescent psychopathy, the Psychopathy Checklist: Youth Version or PCL:YV (Forth, Kosson, & Hare, 2003) and the Youth Psychopathic Traits Inventory or YPI (Andershed, Kerr, Stattin, & Levander, 2002). Finally, a series of tools are described for the risk assessment of overall violence, such as the Youth Level of Service/Case Management

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Inventory or YLS/CMI (Hoge & Andrews, 2002) and the Estimate of Risk of Adolescent Sexual Offense Recidivism or ERASOR (Worling & Curwen, 2001b) specifically designed to evaluate the risk of sexual violence. (see Table 1).

The JI-R (Jesness, 2004) was developed to support the classification and specification processes of diagnosis of juvenile offenders, designed for the population of juvenile offenders from the age of 8 years onwards. It contains 160 dichotomous (true/false) self-report items and includes 10 personality scales: Social maladjustment, Value Orientation, Immaturity, Alienation, Manifest aggression, Withdrawal-depression, Social Anxiety, Repression and Denial. It also has a composite scale called the Asocial index, and two scales based on DSM-IV to anticipate diagnoses of Dissocial Disorder and Oppositional Defiant Disorder (Jesness, 2004). The advantages of JI-R include its sensitivity to changes in attitude occurred in a relatively short period of time, items easily understood by young offenders, it encompasses a multidimensional measurement and facilitates a global index of "asociality" related to the levels of recidivism in criminal adolescents (Estevao & Bichuette, 1985). Moreover, there is empirical evidence that supports the JI-R as a tool that is able to evaluate the psychological heterogeneity that exists among the adolescent offender population (Allen Jr et al., 2003; Antequera & Andrés-Pueyo, 2008; Estevao & Bichuette, 1985; Graham, 1981; Kunce & Hemphill, 1983; Manzi-Oliveira, 2012; Martin, 1981, Regina, 2008; Wenger, 2010). The JI-R has adaptations and exploratory studies carried out in Spain and Chile, as well standards for the Brazilian population (Antequera & Andrés Pueyo, 2008; Manzi-Oliveira, 2012; Moreno, 2009; Wenger, 2010).

Another instrument that is little known by professionals of juvenile justice in Spanish, but widely used in the USA is the MAYSI-2, developed by Grisso and Barnum (1998)

TABLE 1
EVALUATION INSTRUMENTS

Forensic Instrument	Original Authors	Adaptations in Spanish	Objective	Age range
Inventario Jesness-Revisado [Jesness Inventory –Revised] (JI-R)	Jesness (2004)	Brazil: Manzi-Oliveira (2012). Spain: Antequera and Andres Pueyo, (2008). Moreno (2009). Chile: Wenger (2010)	To support the processes of classifying and specifying the diagnosis of juvenile offenders	8 and over
Massachusetts Youth Screening Instrument 2 (MAYSI-2)	Grisso and Barnum (1998)	Spain: C. Moreno and Andres Pueyo (2014)	Screening in detecting mental and emotional health problems	12-17 years old
Youth Psychopathic Traits Inventory (YPI)	Andershed et al. (2002)	Spain: Hilterman et al. (2006)	Psychopathic traits in adolescents	12 years and over
Youth Level of Service / Case Management Inventory (YLS/CMI)	Hoge and Andrews (2002)	Spain: Garrido Genovés et al. (2004). Chile: Chesta (2009)	Risk of recidivism and identifying the dimensions where there is greater risk, which can guide the intervention	12-17 years
Psychopathy Checklist: Youth Version (PCL: YV)	Forth et al. (2003)	Spain: Garrido Genovés (2009); González et al. (2003); Silva (2009); Villar-Torres et al. (2014). Chile: Zuñiga et al, (2011)	Adaptation of the PCL-R for the adolescent population, evaluates psychopathic characteristics, prediction of violent recidivism	12-18 years
Valoración Estructurada del Riesgo de Violencia en Jóvenes [Structured Risk Assessment of Youth Violence] (SAVRY)	Borum et al. (2003)	Spain: Vallés and Hilterman (2011)	Prediction of risk of violence through three major domains: historical risk factors, individual risk factors and protective factors	12-18 years
Ficha de Evaluación de Riesgos y Recursos [Form for Risk Assessment and Resources] (FER-R)	Alarcón (2001)	Original version in Spanish	Evaluation of recidivism risk and protective factors	14-18 years
ERASOR	Worling and Curwen (2001b)	Venegas et al.(2013)	Assessment of risk of sexual recidivism	12-18 years
J-SOAP-II	Prentky and Righthand, (2003)	Spain: Garrido et al. (2006)	Assessment of risk of sexual recidivism	Males between 12 and 18 years
Structured Assessment of Protective Factors for Violent Risk: Youth Version (SAPROF: YV)	De Vries Robbé et al. (2015)	Spain: To be published	Structured evaluation of the protective factors for violence risk	12-18 years

for screening mental and emotional health in young users of the juvenile justice system between the ages of 12 and 17. The MAYSI-2 is a 52-item self-report instrument, standardised and reliable, and it is a measure for identifying signs of mental/emotional problems, including suicidal risk. The MAYSI-2 does not make a clinical diagnosis of mental health disorders, rather the direct scores obtained in each scale can support the decision as to whether or not to refer the adolescent to a complete evaluation in the field of mental health and/or crisis intervention. The MAYSI-2 offers two types of scores on the different scales assessing a score of "precaution" indicating the possible presence of clinical problems in the area evaluated by the scale. The other type of score is "warning", which corresponds to an unusually high score compared to other young people in juvenile justice programs (10% of the young people with the highest scores are located here). The score of "warning" proposes a more comprehensive evaluation should be carried out in the field of mental health and steps should be taken for specific intervention quickly (Moreno & Andrés-Pueyo, 2014). With regards to the gender difference in the use of the MAYSI-2, the findings suggest that women obtain higher scores than men, which is consistent with the literature (Vincent, Grisso, Terry, & Banks, 2008; Wasserman et al., 2004). Its advantages include easy administration (10-15 minutes), reading comprehension equivalent to the skills of 10-11- year-old children, and it can be performed without the need for an experienced mental health professional. There is one limitation; as it is an instrument that is only completed through self-report, the chances of not detecting any problems are increased, either because it is not reported or because the condition is exaggerated; moreover it is focused on experiences of recent occurrence and does not provide information about past medical history or other risk factors (Justice Research Center, 2002). Recently it has been adapted to different European languages including Spanish, Catalan and Arabic (Inforsana, 2015; Moreno & Andrés-Pueyo, 2014). From this last adaptation it has been possible to confirm that the results are similar to those obtained in the US, and the adolescents who enter closed regime centres are those with more symptoms of mental health problems, compared with those in open regime centres or evaluation centres. Also the instrument is able to provide reliable information on 5 of the 7 scales of the test, which makes the MAYSI-2 a promising tool for use in Spanish, further expansion being required in the research with this population (Moreno & Andrés-Pueyo, 2014).

Another construct of great relevance in the area of Juvenile Justice is psychopathy, the consolidation of which has been accompanied by the development of a basic tool for evaluation and diagnosis, the PCL-R. In particular we will present the PCL:YV (Forth et al., 2003), developed as an adaptation of the PCL-R for the adolescent population. It is aimed at young people between 12 and 18 years of age and it evaluates patterns of deception, fighting, bullying and other antisocial acts in adolescents, the early detection of which is critical. The PCL:YV helps in assessing the factors that contribute to the development of antisocial behaviour and psychopathy in adulthood, as the authors defend the idea that psychopathic traits emerge gradually, and therefore it is possible to identify some of these issues early. The instrument is complex, much more so than a self-report questionnaire and requires the completion of a clinical semi-structured interview with the adolescent which must be videotaped, in addition to the testing of additional information from sources other than the young person in question. After obtaining both data sources, the next stage is to rate the 20 items that make up the PCL:YV through a rating scale ranging from 0 to 2 points (no, maybe, yes), using the manual where each of the items are described. The authors note that the average administration time is 90-120 minutes for the semi-structured interview with the adolescent and 60 minutes for the review of the collateral information (Forth et al., 2003). The authors do not specify a cut-off score for clinical diagnosis, since they consider it to be premature to adopt one when more empirical evidence is still needed to support the stability of psychopathy from adolescence to adulthood, so a dimensional score is provided related to the number and severity of the psychotic traits present in the person being evaluated (Forth et al., 2003). The PCL:YV is organised based on four factors: Factor 1, called the Interpersonal factor, includes the items False personal image, Grandiose sense of personal worth, Pathological lying and Manipulation for personal gain; Factor 2, or the Affective factor, includes Lack of remorse, Superficial Affect, Insensitivity and lack of empathy, and Failure to accept responsibility; Factor 3, or Impulsive behaviour, covers Stimulation seeking, Parasitic orientation, Lack of goals, Impulsivity, and Irresponsibility; and Factor 4, or the Antisocial factor, includes Poor anger management, Early behavioural problems, Serious violation of bail (measure), Serious criminal conduct, and Criminal versatility. The items Impersonal sexual behaviour and Unstable interpersonal relationships are the only items that are not included in any factor. The psychometric properties reported by the authors were obtained from 19 samples of clinical and forensic population, a total of 2438 young people (Forth et al., 2003), based on which it was concluded that the scores vary in relation to the context of administration of the PCL:YV, the samples with the highest scores were those of young people that were institutionalised, followed by those who were fulfilling sentences in a community setting and the ones who scored lowest were individuals who came from community

samples or clinics. The PCL:YV has demonstrated good prediction of violent behaviour (Gretton, Hare, & Catchpole, 2004; Hilterman, Nicholls, & van Nieuwenhuizen, 2013; Schmidt, Campbell, & Houlding, 2011). It has validations for Canada and England, while countries such as Spain, Chile and Argentina have adaptations and psychometric examinations (Garrido-Genovés, 2009; González, Molinuevo, Pardo, & Torrubia, 2003; Silva, 2009; Villar-Torres, Luengo, Romero, Sobral & Gómez-Fraguela, 2014, Zuñiga, Vinet, & León, 2011) that support its use with adolescents in juvenile justice contexts.

In the same vein, the YPI (Andershed et al., 2002) is worth a mention. It is an instrument of self-report developed for assessing psychopathic traits in adolescents from the age of 12 years in community (not legal) settings based on traditional models of psychopathy. The YPI focuses on personality traits and not those of antisocial behaviour, giving greater relevance to interpersonal and affective traits. It has 50 items which are answered on a 4-point Likert scale, and are grouped into the following three factors: Arrogance/Manipulation (made up of the subscales Dishonest Charm, Grandiosity, Lying, Manipulation), Callous/Unemotional (containing the subscales Remorselessness, Callousness, and Lack of empathy) and Impulsiveness/Irresponsibility (Thrill Seeking, Impulsiveness, and Irresponsibility). The items are presented indirectly and in a non-transparent way, the psychopathic traits being presented in the form of skills, reducing the influence of distortion due to social desirability in the responses. The research shows good psychometric properties for the YPI, supporting its use in juvenile justice for assessing psychopathic characteristics (Poythress, Dembo, Wareham, & Greenbaum, 2006), but it was found to have a low predictability (Cauffman, Kimonis, Dmitrieva, & Monahan, 2009). Finally, there is a Spanish adaptation of the instrument developed by Hilterman, Vallès and Gilaert (2006).

Unlike the tests of generalist or clinical origin applied to juvenile offenders, the tests dedicated to assessing the risk of violence and recidivism are very recent (Dematteo et al., 2016). After the educational nature of the juvenile justice system was established, a further step was taken in considering the risk of recidivism as an important consideration in specific interventions with young offenders, together with the importance of their mental health. This set of evaluation tools that have been specially built for work in the forensic field, particularly those instruments with predictive utility for both recidivism and violent behaviour (among which those following the technique of Structured Clinical Judgment predominate) characteristically contain aspects of both clinical assessment and actuarial elements, i.e., empirically validated prediction data (Andrés-Pueyo & Echeburúa, 2010). To perform this type of assessment it is necessary to use evaluation guidelines that direct the whole process, as well as specialists that have been trained in the use of the tools (Andres Pueyo & Redondo, 2007). Next, we review the main instruments of structured professional judgment that allow an assessment of the static and dynamic factors that predict the recidivism of antisocial behaviour and the risk of violence in adolescents. The first is the YLS/CMI developed by Hoge and Andrews (2002) to estimate the risk of recidivism in adolescents aged between 12 and 17 years and to identify the dimensions where there is greater risk and which require prioritised intervention. Thanks to this dual nature the YLS/CMI is useful in terms of educational intervention within juvenile justice. The authors designed the instrument bearing in mind the assessments to be made in juvenile justice both pre- and post-sentence, which permits its use in the entire management of the case. The construction of the instrument is based on the three principles of case classification proposed by Andrews, Bonta and Hoge (1990). The first is called the Risk principle, and states that treatment services offered to offenders must be related to the level of risk presented, i.e., offenders with a high risk of recidivism should receive the most intensive treatments, while those at low risk should receive low-intensity treatments and may not even receive any type of treatment. The second principle is that of Need and notes that the treatment objectives should be linked with the criminogenic needs present in the case, since it is these needs that, when treated, will influence the reduction of recidivism. The third principle is Responsivity or individualization and it indicates that treatment decisions should consider other characteristics of the adolescent offender and their circumstances which may affect the responsiveness to treatment. These other characteristics are not generally criminal risk factors, but they have much relevance for handling the case.

As with the other protocols of risk assessment, the way to complete the YLS/CMI is through the extensive collection of information on the case by the professional in charge (from clinical and criminological records and interviews with the adolescent and/or third parties, such as family members, teachers or other professionals who know the adolescent). With all this information visible, the YLS/CMI can be completed in about 20 to 30 minutes (Hoge, 2005). The YLS/CMI has 5 parts, the first is the Evaluation of risks and needs, which contains 42 items and is divided into 8 groups of criminogenic risk factors (dynamic factors, which determine the objectives of the intervention and static factors, characterising the chronic risk of the case). These groups of items are: Crimes and past and current judicial measures, Educational guides, Formal education and employment, Relationship with peer group, Substance use, Leisure/fun,

Personality/behaviour, and Attitudes, values and beliefs. Each item is valued by the professional responsible with regards to its presence/absence in the case. In addition, in seven of the risk factors respondents are requested to detail qualitatively the strengths of the adolescent under evaluation in relation to that factor. There is also a space for comments and to describe in detail the sources of information the professional used to determine the presence of risk items (Hoge & Andrews, 2002). The second part is the summary of risk and need factors, first through the sum of items present (in each of the eight groups of risk factors evaluated). Next is the sum total of all of the groups, obtaining both an aggregate for each group of risk factors and an overall risk score; the latter offers four categories of risk and need level (from low to very high). The third part is interested in the Assessment of Other Needs/Special Considerations, which allows you to record the presence of other factors that may be relevant for the management of the particular case being evaluated. The fourth is the General Assessment of Risk/Need and in this section the professional in charge of the assessment should consider all of the available information relating to the case and should estimate the level of risk and need individually, which may or may not agree with the result obtained through the sum total of items at risk (second part) and, in any case, it must justify the reasons that led the professional to make this decision to ratify or modify the resulting valuation of actuarial calculation. The fifth part of the YLS/CMI requires the professional in charge of the assessment to indicate the intensity of treatment appropriate for the adolescent, considering the level of risk and need in doing so (Hoge & Andrews, 2002).

The YLS/CMI's ability to predict recidivism has been supported by several studies (Olver, Stockdale, & Wong, 2012; Schwalbe, 2007) including in the Spanish population (Graña, Garrido-Genovés, & González, 2008; Hilterman et al., 2013). It has been adapted in Spain with the name of *Inventario de Gestión e Intervención para Jóvenes* [Inventory of Management and Intervention for Young People] or IGI-J (Garrido-Genovés, López Silva, López & Molina, 2006) and in Chile as the *Inventarios de Riesgos y Necesidades Criminogénicas* [Inventories of Criminogenic Risks and Needs] (Chesta, 2009). For the Spanish case, all of the risk scales, except for the scale of Leisure/fun, are able to discriminate between recidivists and non-recidivists (Graña et al., 2008), similar to the findings by Garrido-Genovés et al. (2006), who additionally excluded the formal education/employment factor from the ability to differentiate between the two groups. Finally, the risk factors Past crimes, followed by Substance use and Personality/Behaviour are the best predictors of recidivism (Graña et al., 2008). It is currently used by juvenile justice teams dealing with the post-sentence intervention in the community of Madrid (Graña & Rodríguez, 2011).

Another protocol for assessing the risk of violence and recidivism, specifically for adolescent populations, is the SAVRY (Structured Assessment of Violence Risk in Youth), developed by Borum, Bartel and Forth (2003) for predicting the risk of future violence, both physical and sexual, and the planning of criminal and clinical interventions in young and violent offenders from 12 to 18 years of age. It is an instrument that has 30 items, of which 24 assess risk factors and 6 assess protective factors. The risk factors are divided into Historical factors: items that are based on past behaviours or experiences, usually static and not susceptible to change that are useful for assessing the risk of further violent behaviour, but are less useful for assessing and planning interventions. Historical factors are Previous violence, History of nonviolent criminal acts, Early onset of violence, Follow-up in the past/failure of previous interventions, Attempted self-harm or suicide in the past, Exposure to domestic violence, History of child abuse, Crime among parents or caregivers, Early separation from parents or caregivers, and Poor performance at school. Then comes the set of Social/contextual factors, which consider the influence on the young person of interpersonal relationships factors, contact with social institutions and the environment. Here the factors to assess include Delinquency in the peer group, Peer group rejection, Stress experienced and the inability to face difficulties, Poor ability of parents to educate, Lack of personal/social support from other adults and Marginal environment. Lastly, we find the Individual factors, focusing on attitudes, aspects of the psychological and behavioural functioning of the adolescent under evaluation, which include items of Negative attitudes, Risk-taking/impulsivity, Substance abuse problems, Anger management problems, Low level of empathy/remorse, Concentration problems/hyperactivity, Low cooperation in interventions and Low interest/engagement at school. In addition, the SAVRY includes a group of protective factors - a major innovation in these tools - defined as the factors that can reduce the negative impact of the risk, or even decrease the probability of the occurrence of a future violent act. These factors are Prosocial involvement, Strong social support, Strong links and ties with at least one prosocial adult, Positive attitude towards interventions and authority, Strong commitment to school, and Perseverance as a personality trait (Borum et al., 2003). As the SAVRY is a protocol that is guided by the technique of Structured Clinical Judgment (Andres Pueyo & Echeburúa, 2010), on the coding sheet additional risk factors can be included that the evaluator considers relevant for understanding the potential risk of violence for the adolescent being evaluated. All of the risk factors of the SAVRY are encoded

in three levels: High, Moderate and Low, with no numerical value being assigned and no predefined cut scores. The other six items related to protective factors are encoded in two values (Present or Absent).

The SAVRY has a manual to complement the instrument, providing instructions, recommendations and definitions of coding criteria, as well as example cases, which are very informative. To complement it, the authors point out that to assess the risk or protective factors, evaluators can administer test or measurement scales to guide their decision as to whether or not to rate the item. Note that the SAVRY does not provide a final total risk score, as in the case of the YLS/CMI, instead the final evaluation must be made by the professional, taking into consideration the assessment of risk and protective factors as a whole (Borum et al., 2003). In relation to its ability to predict violence, in a study with 10 years of follow-up on juvenile offenders, the authors state that the SAVRY predicts robustly non-violent, violent and sexual recidivism in the group of adolescent males (Schmidt et al., 2011). As for the protective factors, the information is contradictory, since some studies indicate that with three years of follow-up the protective factors have a low predictive capacity (Rennie & Dolan, 2010), while with a follow-up of 10 years it was observed that the protective factors had a moderate to high effect size for predicting the absence of non-violent and violent recidivism (Schmidt et al., 2011). In the only predictive validity study published to date using the SAVRY in a Spanish juvenile justice population, after one year of follow-up it shows a moderate effect size for predicting recidivism (Hilterman et al., 2013). Furthermore, the estimate for recidivism carried out by the person responsible for the adolescent's case in the justice program (clinical and non-structured), with a self-report estimate from the adolescent in relation to their own recidivism, these two together were compared with the final score of the SAVRY, the latter showing significantly greater predictive ability. It has an authorised adaptation to Spanish and Catalan developed by Vallés and Hilterman (Borum, Bathel & Forth, 2011), and currently the SAVRY is used officially in the framework of the evaluation and intervention process established in the circuit Juvenile Justice of Catalonia (Cano & Andrés-Pueyo, 2012).

Another interesting protocol to review, because of its Latin American origin, is the Assessment Form for Risk and Resources, or FER-R (Alarcón, 2001), an instrument of structured professional judgment developed for use in programs of juvenile justice in Chile designed to prevent the risk of recidivism, among other objectives. The form consists of 60 items and permits the recording of two areas: Criminogenic risk factors and Protective factors, based on the assessment of static and dynamic risks. Among the static risks it assesses, it evaluates History of social maladaptation behaviours, Derivation from protection/intervention programs and Impact of previous interventions. The dynamic risks it evaluates include Education, Peer relationships, Family, Interests of the adolescent, Drugs, Attitudes and manifest tendencies. Lastly, there is a final section that evaluates Family and personal protective resources. A predictive validity study has been carried out on the FER-R in which it demonstrated an adequate ability to predict recidivism in Chilean juvenile offenders (Alarcón, Wenger, Chesta, & Salvo, 2012).

Finally, we present two instruments for assessing the risk of sexual recidivism, the ERASOR and J-SOAP-II, together with a lesser-known instrument, SAPROF, which evaluates only the protective factors and is compatible with the use of any other protocol for risk assessment and can even be used independently. The ERASOR (Worling & Curwen, 2001b) is a checklist, developed on an empirical basis, which helps evaluators to estimate the short-term risk of sexual recidivism in adolescents aged 12 to 18 who have previously committed a sexual assault. It was designed as a single scale of 25 risk factors grouped into 5 themes: Sexual interests, attitudes and behaviour, History of sexual assault, Psychosocial functioning, Family functioning/environment and Treatment. Each risk factor is scored based on four possible criteria: Present, Possibly present, Not present and Unknown. The authors have developed a manual containing the description of each of the risk factors, which enables the coding of items (Worling & Curwen, 2001a), and they stress the need for all professionals who use it to become familiar with it, as well as with the different publications and follow-up research. Moreover, they emphasise that the evaluators must be highly trained in the assessment of adolescents, their families and, especially, in the issues of sexual violence. The use of the ERASOR requires multiple methods for collecting the information that allows the evaluator to estimate the risk of sexual recidivism of the adolescent. The authors propose using a combination of clinical interviews with the person being evaluated, the administration of psychological tests, the observation of behaviour and official information from the court case. As a minimum requirement, the evaluator must obtain information directly from the adolescent and from the official records of sexual assault. In addition, it is required to collect information from multiple sources, such as the victim, the police, the family and other mental health professionals linked with the adolescent. To determine the overall risk level of the person being assessed, the authors indicate that it is derived from the clinical judgment. Despite the existence of a relationship between the number of high-risk factors present in the person being evaluated and the final assessment of the risk of recidivism, the clinical judgment should also take into

consideration the combination of factors present, as the evidence indicates that the presence of just one particular risk factor may indicate a high risk, for example, the statement by the adolescent that they will commit another sexual assault or self-reporting sexual interest in children and minors. There are a number of international studies indicating that the ERASOR has good psychometric properties and adequate prediction capabilities (Viljoen, Elkovitch, Scalora, & Ullman, 2009; Worling, Bookalam, & Litteljohn, 2012). There is a Spanish translation available, but it is unpublished and only available on request from the authors of the translation (Venegas, Sanchez, Hilterman & Siria, 2013).

The Juvenile Sex Offender Assessment Protocol-II or J-SOAP-II (Prentky & Righthand, 2003) is a checklist that allows evaluators to conduct a systematic review of risk factors that the literature has associated with adolescents that commit sex crimes. The authors designed it for use with adolescent boys between the ages of 12 and 18 who have been prosecuted for committing a sexual offense as well as with adolescents that have not been convicted, but have a history of coercive sexual behaviour. It is suggested that the decision regarding the risk of recidivism is not made based only on the J-SOAP-II, rather it must be a part of a comprehensive evaluation in the risk assessment process. The instrument consists of 28 items, covering static risk factors organised into two scales: Sexual orientation/impulse and Impulsivity-Antisocial behaviour; and dynamic risk factors through the scales of Intervention, and Adjustment and social stability. Studies on forensic samples support its predictive capability, validating its use as a complementary tool for the assessment of the risk of recidivism of sexual assault in adolescents (Martinez, Flores, & Rosenfeld, 2007; Viljoen, Mordell, & Beneteau, 2012). The Spanish adaptation was developed by Garrido, Silva and López (2006), with the name *Protocolo de Evaluación de Agresores Sexuales Juveniles* [Assessment Protocol Juvenile Sex Offenders].

Finally, the Structured Assessment of Protective Factors for Violent Risk: Youth Version, or SAPROF-YV (de Vries, Geers, Stapel, Hilterman, & de Vogel, 2015), is a tool for the structured assessment of protective factors for risk of violence, built for use in combination with and to complement other risk assessment tools, such as the SAVRY or the YLS/CMI. According to the authors this combination facilitates a more balanced assessment of the future risk of violence and sexual violence, while also helping to focus the attention on the prevention of violence from a positive approach to treatment. The version for adolescents between the ages of 12 and 18 was produced in 2013, the authors note that the protective factors may be even more promising for the positive development of adolescent offenders, and they hope that this version will be an important complement to the risk assessment in juvenile justice. Particularly professionals in the field of forensic psychiatry state that the SAPROF (in its adult version) is proving to be very useful in formulating treatment objectives, justifying the phases of treatment, monitoring the progress taking place in each phase and facilitating positive communication regarding the risk (de Vogel, de Ruiter, & Bouman, 2011). The SAPROF-YV consists of 16 dynamic protective factors, based on the international literature related to the factors that are specific to the risk of youth violence, and organised into 4 groups of items, the first concerning Resilience: Social competence, Coping, Self-control and Perseverance. The second group comprised of Motivational items: Future orientation, Attitudes towards agreements and conditions, Medication, School/work, Leisure activities. The third group consists of Relational items: Parents/guardians, Peers, Other supportive relationships. And finally the External items: Pedagogical climate, Professional care and Court orders. These items can stimulate the development of positive treatments, offer additional guidance for risk management, and provide new opportunities based on the evaluation of the strengths of the adolescents. The authors reported that two pilot studies were developed in 2013, the Dutch version was published in 2014, and versions in English and Spanish would be published in 2015 (de Vries et al., 2015).

DISCUSSION

The available resources and tools in Spanish for evaluation using psychological tests of personality traits and cognitive abilities, psychopathological symptoms and syndromes, and other psychological constructs from criminology and the forensic field applied to juvenile offenders are varied, current and comparable to those that exist in the English-speaking world. Since the characteristics of the tasks carried out by professionals working in juvenile justice services (detention centres, corrective measures in a community setting, mediation, etc.) are very diverse, the demands they receive are varied and generally complex. Among the technical resources available are the psychological tests that, in general, were initially designed for the demands that are characteristic of the school, clinical or socio-family environments, and to a lesser extent for meeting the demands of the forensic and criminological field. So most of the psychological tests reviewed were developed in the clinical, educational and personological field, but this does not prevent their use in the field of juvenile justice. Many of the demands of this field are similar to those of other fields, for example, to estimate the level of IQ, the mental health or the maturity of a teenager before they are prosecuted for a criminal complaint. In general, the adequacy of the measures of justice applied to an

adolescent necessarily include clinical and educational services, therefore the tests initially developed in those areas can be used with full guarantees in juvenile justice. However, there are some spaces of the management of juvenile offenders in the criminal context, such as assessing the risk of recidivism, that require specific tools like SAVRY or ERASOR, which have developed in the last 20 years and have also been adapted to Spanish (Dematteo et al, 2016; Grisso, 1998).

This review shows an overview of the tools that professionals working in the area of juvenile justice have at their disposal, to respond to the demands they receive from the workers in the justice circuit. There are traditionally clinical tools that are very useful for evaluating key aspects in the forensic area, for example instruments that detect clinical symptoms such as the SCL-90, or the BDI-II if it is necessary to investigate depressive symptoms in depth; or the DISC-IV if the exploration of psychopathology requires greater depth and a broader spectrum in accordance with the criteria described by the DSM-IV. Also described are the MMPI-A and the MACI as tools of interest for understanding the relevant psychopathological symptoms and psychological functioning styles of adolescents. Less common is the use of personality assessment tools, such as the NEO-PI or the EPQ in their different formats, because although they enable us to understand the structure of personality at the level of traits, it is unlikely that these results will yield answers to psycholegal questions or allow us to advise in the processes of adolescents through the judicial circuit, since their results provide little specificity in the comparison between personality and criminal behaviour. That is, we can find out if there is high Psychoticism with the EPQ or low Agreeableness and Conscientiousness with the NEO-PI, which indicates the presence of certain traits that are more or less related to the existence of a disposition towards criminal behaviour, but are not directly or causally related with the criminal act itself. Notwithstanding the above, these instruments do allow us to have a kind of basic X-ray of the temperament and personality of the offender, allowing us to get closer to their psychological individuality, which will be useful in the process of intervention and generalisation of their behaviour to open social contexts and reinsertion. This review highlights an important limitation with regards to the lack of psychological tools for assessing personality in contexts of juvenile justice; as we have noted, only the JI-R is designed to assess personality and attitudes related particularly to the population of juvenile offenders, but we do not yet have an adaptation or professional weighting, which certainly reduces its potential inclusion in the professional field, despite the fact that it is a tool that could fill a latent gap in forensic evaluation in Spanish, which has seen greater development in tools for predicting the risk of recidivism and violence, leaving behind the evaluation by self-report of personality aspects, inputs that are relevant to case management in treatment.

On the other hand, there is a growing number of specific forensic tools that have been adapted to Spanish, which are aimed mostly at predicting violence, either generally as with the YLS/CMI; general, violent and sexual as with the SAVRY; specifically for violent recidivism or psychopathy like the PCL:YV, or the recidivism of sexual crimes as with the J-SOAP-II or ERASOR. Despite the rise in recent decades of the development of forensic tools in English-speaking countries, the Spanish and Latin American situation is different and continues to suffer limitations in the development of such tools. As a significant defect, we note the lack of manuals for the use of forensic tools, especially those of Structured Professional Judgment, including descriptions of both their construction, adaptation, psychometric properties, the description of variables and guidelines for scoring. Generally the construction and dissemination is needed of appropriate scales for interpreting the different tests, which include when it is necessary to differentiate by age and/or sex; improvements are also required in the commercial distribution channels to optimise the dissemination and use of the instruments. This is a clear challenge for the development and adaptation of forensic instruments in juvenile justice, because although there are exceptions such as the Spanish adaptation of SAVRY (Borum et al., 2011), most of the other instruments do not have what we have outlined here.

With the clarity of knowing the tools available in Spanish, the next challenge will be how the professionals decide the ideal instrument or strategy for the assessment. Some recommendations for this suggest that the people in charge of the forensic evaluation should use the appropriate psychological tests for the purpose for which they were designed, i.e. the instrument should not be required to provide more results than it has empirically been shown to be able to do (Archer, Stredny, & Wheeler, 2013). For example, it is not correct to use the YLS/CMI if one wishes to predict the risk of sexual recidivism, or the MACI or MAYSI if you are aiming to use them to diagnose a mental disorder. The choice of test to be used in each case should not be guided by a standard battery, but it must be adapted to the evaluation needs and objectives for each adolescent; to do this, Echeburúa, Muñoz, and Loinaz (2011) indicate that professionals should be pragmatic, when deciding whether to use a particular instrument, thinking about the usefulness of the information obtained after use, considering its suitability for the particular case, and if necessary taking into account the educational level of the adolescent to assess whether they can adequately answer all questions, in addition to considering whether the

evaluator has mastered the technique for using it. It is also recommended to note the scientific quality of the instrument, i.e., prioritising tests that have good psychometric properties, as well as validity studies and standards in the forensic population. Hoge (2012) on the other hand, recommends that forensic evaluations are conducted by professionals that have been trained in the area and who are experienced in the use of the tools to be used. We should remember that instruments such as the PCL:YV or the DISC-IV require prior training on the test and how to complete it, and without it the results obtained will have less validity. Finally, it is important to remember the need to maintain the rigour, good practices and professional ethics in all forensic evaluation, especially in juvenile justice, since every decision taken in relation to the young individual throughout the judicial circuit will have repercussions - sometimes very serious- both in the adolescent's life and in society. Therefore the professionals working in this area should ensure that the steps that guide these decisions are made according to the highest standards and in the most optimal way (Hoge, 2012).

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ADDICTION IS *NOT* A BRAIN DISEASE

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En los últimos años se ha ido consolidando la idea en el campo médico-psiquiátrico de que la adicción es una "enfermedad cerebral", como ya así recoge el DSM-5. En este articulo se analiza cómo ha surgido y se ha consolidado esta idea, las críticas que ha recibido, las consecuencias profesionales si este modelo se hace hegemónico, junto a los intereses subyacentes al mismo. Se concluye defendiendo la necesidad de mostrar como psicólogos nuestras claras aportaciones al campo de las adicciones, como el de las variables psicológicas que son necesarias para la comprensión de las adicciones, para su prevención, junto con el papel central del tratamiento psicológico por su eficacia en las mismas. También debemos denunciar los reduccionismos, como el que representa el modelo de enfermedad cerebral frente a un modelo biopsicosocial de las adicciones.

Palabras clave: *Adicción, Drogas, Enfermedad cerebral, Psicología.*

The idea that addiction is a "brain disease" has gradually been consolidated in the medical-psychiatric field over the last years, as it appears in the current DSM-5. In this paper we analyse the way this idea has arisen and been consolidated, as well as the criticisms that it has received, the professional consequences if this model becomes hegemonic, and the underlying interests. The conclusion defends the need to show, as psychologists, our clear contributions to the field of addictions, and the psychological variables that are necessary in order to understand and prevent addictions, as well as the central role of psychological treatment due to its effectiveness. We must also denounce the reductionism that the model of brain disease represents in comparison with a biopsychosocial model of addiction.

Key words: *Addiction, Drug, Brain disease, Psychology.*

In volume 507 of the prestigious journal *Nature*, a letter to the editor was published, on 6th March 2014, entitled "Addiction: not just brain malfunction" signed by Derek Heim (2014). In the footnote there were 94 signatories, relevant researchers, clinicians, addiction journal editors, treatment centres, etc., from various countries, criticising the considering of "addiction as a brain disease" because "substance abuse cannot be divorced from its social, psychological, cultural, political, legal and environmental contexts; it is not simply a consequence of brain functioning "(p. 40). They insisted that "such a myopic perspective undermines the enormous impact people's circumstances and choices have on addictive behaviours. It trivializes the thoughts, emotions and behaviours of current and former addicts" (p. 40). Some of the signatories are well known people, such as Gerard Bühringer, Nick Heather, Jerome H. Haffe, Stanton Peele, Tim Rhodes, Stephen Rollnick, Robin Room, Roland Simon, Tim Stockwell, etc.

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This is an important issue, central to the conceptualisation of addiction, and one that has clear implications for drug prevention, treatment and policy. Also on the professional role of different professions, such as that of psychology. Unfortunately, in recent years the biological-brain conceptualisation of addiction has taken a reductionist path, because it is being subjected to the clear interests and pressure groups surrounding it and because of the rupture, or distancing, which we are witnessing after decades of fruitful collaboration between different disciplines in the field of addictions.

In these pages we analyse the facts that have led to the current situation and what the future holds from a psychological perspective.

WHAT HAS BROUGHT US TO THIS SITUATION?

The first approaches to addiction as a brain disease

There have been several models that have dominated the field of addictions throughout history until it became a major social problem, between the 1960s and 1980s in the majority of developed countries.

Already in the 19th century different neurologists began to consider that addiction was a brain disease, an idea

which remained partly in force during the 20th century in the medical and psychiatric field, especially applied to alcoholism (Kushner, 2010). In the case of alcohol a distinction was made between people who controlled their consumption and those who were not able to do so, the latter beginning to be considered as sick (Jellinek, 1960) and with a genetic predisposition to alcoholism. In later years it was shown that the cause of alcoholism or drug use was multiple (e.g., Edwards, 2002) moving to a biopsychosocial explanatory model (Melchert, 2015).

A more recent origin of this concept of addiction as a brain disease comes from research studies on opiates, carried out especially on animals, since the middle of last century. Subsequently, this was aided by the discovery of brain receptors; the funding of studies within the US government's drug war focused on finding a biological cause for them; and the need to investigate the "responsibility" of individuals (if the individuals are brain sick then they are not responsible for their actions; if they lose their will power or self-control then they are not responsible) (Vrecko, 2010).

The North American background concerning the NIDA

No doubt, those who have allowed this model to appear, develop and become established are the North American NIDA (National Institute on Drug Abuse) and several of its directors or individuals related to it since its inception, such as Jerome H. Jaffee, Alan Leshner, Charles P. O'Brien and its current director Nora Volkow.

In 1971 Jerome H. Jaffee first occupied the post of Head of the Special Action Office on Drug Abuse Prevention (SAODOP), better known as the Drug Czar. At that time, the United States was at war in Vietnam and had a serious problem of heroin use among returning soldiers. Jaffee thought it would be a tactical victory for addiction to be deemed a brain disease, as this would help to convince the senators of his proposals, using a pragmatic model (Satel & Lillienfeld, 2014).

An important milestone occurred in 1977 when Alan Leshner (1977), director of the NIDA at the time, published an article in *Science* in which he suggested that the best way to conceptualise addiction would be to consider it as a chronic brain disease characterised by relapse. Although he indicated that the onset of drug use was voluntary, its use entailed brain changes at the neurochemical level, with the result that when people wanted to stop using drugs they had problems in succeeding. Therefore the behaviour became compulsive and they relapsed quickly. For him what identified addiction as a brain disease were the changes in the brain structure and function of the individual, so the treatment should be both behavioural and pharmacological. In addition, he attached importance to the social context in drug use because, interestingly, he used the example of what had happened to the soldiers of the Vietnam War who had stopped using heroin upon their return home. Therefore, the use of the expression *psychobiological disease* appears in different parts of that article, including biological, behavioural and social or contextual elements.

Among the most influential American researchers who consider drug use to be a disease is Charles P. O'Brien, a prestigious researcher in the field of psychiatry. For him, addiction is best conceptualised as a disease, although he does acknowledge that not all drug users become addicted and he believes that the best treatment is one that combines medication with behavioural therapy (O'Brien & McLellan, 1996).

But no doubt the person who has most favoured the creation and consolidation of a brain disease model of addiction is Nora Volkow, director of the NIDA since 2003. In 2007, the NIDA published its informative manual "Drugs, brain and behaviour. The science of addiction" which also has a Spanish version (NIDA, 2008) and was updated in 2010 and 2014. It says that "addiction is defined as a chronic, relapsing brain disease that is characterized by compulsive drug seeking and use, despite harmful consequences. It is considered a brain disease because drugs change the brain—they change its structure and how it works. These brain changes can be long lasting, and can lead to the harmful behaviors seen in people who abuse drugs" […] "Addiction is similar to other diseases, such as heart disease. Both disrupt the normal, healthy functioning of the underlying organ, have serious harmful consequences, are preventable, treatable, and if left untreated, can last a lifetime" (p. 8).

The initial decision to take drugs is voluntary; but when it becomes drug abuse, the individual's ability to exercise self-control becomes extremely poor. This is attributed to the brain changes that affect judgment, decision making, learning, memory, and behaviour control, leading to the compulsive and destructive behaviours that are a result of the addiction. They also consider the existence of risk and protection factors for addiction, recognising that there is no single factor that determines that someone will become

a drug addict. They also consider that genetic factors contribute only 40 to 60% of vulnerability to addiction and indicate that frequent drug abuse leads to the appearance of various mental disorders (the well-known dual pathology defended by Spanish psychiatrists).

On the positive side, addiction is viewed as a treatable disease, but with insistence on its chronicity and the relapse process. Interestingly, when talking about what treatment is effective, they recommend the combination of drugs, when available, with behavioural therapy. It should be noted that for the treatment of most drug addictions there are no effective pharmacological treatments, only psychological treatment (e.g., cocaine, cannabis, etc.), and when there are pharmacological treatments it is usually necessary to use them together with psychological treatment.

In summary, the NIDA has clearly opted to consider addiction as a chronic brain disease characterised by relapse, in a social context, with a clear genetic component (or, more precisely a gene-environment-stress interaction), with significant comorbidity with other physical and mental disorders (Courtwright, 2010; Volkow & Morales, 2015), and much of its data based on animal research. It stresses the central claim of this model that the persistent use of a drug produces long-term changes in brain structure and function.

The DMS-5. Addiction is a brain disease

The NIDA model is clearly reflected in the DSM-5 and its conceptualisation of the substance use disorder (SUD): "An important feature of the substance use disorder are the underlying changes in brain circuits that persist after detoxification and occur especially in people with severe disorders. The behavioural effects of these brain changes are shown in repeated relapses and the intense desire to eat when exposed to drug-related stimuli" (APA, 2014, p. 483).

The DSM-5 has introduced significant changes to the DSM-IV (Becoña, 2015; Compton, Sawson, Goldstein & Grant, 2013; Hasin et al, 2013). The three main changes are as follows: a) the cut-off point proposed for the SUD, 2 out of 11 criteria. Several studies indicate that this is a very low cut-off point and should be increased to 4 or 6 criteria, depending on the substance. b) The introduction of the criterion of craving, which has been made by "consensus" and because there are "drugs" for it, even though there is no evidence that it is a central aspect in the case of some drugs. This was put in writing by the members of the group that developed the DSM-5 for addictions (Hasin et al., 2013). c) The major limitation involved in delimiting in clinical practice whether the person has a SUD due to consumption of a psychoactive drug prescribed by the doctor or if they have it due to taking the drug on their own ("self-medicating") or if they are really an addict (e.g., in the case of morphine). In addition, there is the underlying question of why, in cases where the person takes a drug prescribed for them, they are not diagnosed and if it was not prescribed for them can a person be considered to have a SUD? Where is the reliability in the diagnosis in each case?

Note also that the DSM-5 talks of a disorder, whereas the NIDA talks of brain disease. Clearly this is a huge leap.

CRITICISM OF THE CONSIDERATION OF ADDICTION AS A BRAIN DISEASE

In recent years there has been strong criticism of the consideration of addiction as a brain disease. The most important article criticising this is by Hall, Carter and Forlini (2015), published in *The Lancet Psychiatry*. It reviews the evidence that exists on the disease model of addiction, analysing studies on animals, neuroimaging studies of people with addictions and research on the role of genetics in addiction, focusing the criticism on five aspects.

The first is whether addiction is a chronic disease. Hall et al. (2015) consider that it is not, since many people with addictions recover without treatment, which is known as "natural recovery" (Stea, Yakovenko & Hodgins, 2015). The best known case, which has already been mentioned, is that of the American soldiers addicted to heroin in the Vietnam War, most of whom stopped using without resorting to treatment when they returned (Robins et al., 2010). Similarly, we have evidence that people addicted to recreational drugs respond to small changes in their personal situations, as shown with the use of incentives (Heyman, 2009). In addition, a significant amount of those who use drugs in adolescence stop using them in adulthood, especially after the age of 25, at which time adult roles are assumed (Becoña, 2002).

The second concerns the animal models of addiction. The existing models of addiction using rats are usually for heroin, with models of self-administration of opioids in standardised and controlled conditions, which bears little resemblance to human behaviour in every situation. In addition, when animals are in enriched environments they

have different patterns of self-administration of drugs. For example, rats trained to self-administer drugs refrain from doing so when they can access natural support, such as food or coupling (Ahmed et al., 2013).

The third aspect is about the genetics of addiction. Addiction is not a disorder that occurs only in those who have so-called addiction genes. Studies indicate that genetic prediction is the same as a simple family history of consumption (Gartner et al., 2009). Therefore, genetics is not very informative with regards to addictions today.

The fourth aspects relates to neuroimaging studies in humans. Although these studies show that addicts differ from non-addicts, this appears to be due, at least in part, to the bias produced by the sample sizes and the size differences. In addition, case-control studies do not show whether addiction is a cause or a consequence of the differences in brain structure and function or some combination of the two (Ersche et al., 2013).

The fifth is the increasing complexity of the neurobiology of addiction, with many neurotransmitter systems and many brain structures involved. Therefore epigenetics (changes in gene expression in the brain system that can be caused by drug use) are increasingly important (Volkow & Morales, 2015).

Although one would expect that this model would lead to the development of effective drug treatments, this has not happened. Let us remember failures such as the vaccines for different drugs, newer drugs with low results (e.g., Nalmefene), ineffective brain surgery for addicts, etc. Huge amounts of money are involved in this research and it is forgotten that simple and inexpensive measures, such as restrictive legislation regarding alcohol or tobacco, or measures such as increasing taxes, are effective, efficient and cheap (Babor et al., 2010).

Another notable criticism of the brain disease model of addiction is that of Satel and Lillienfeld (2014). For them, this model wrongly implies that the brain is the most important level of analysis and most useful in understanding and treating addictions. This obfuscates the dimension of choice in addiction, the ability to respond to incentives, and the fact that people use drugs for various reasons. This is exemplified with the aforementioned study by Robins et al. (2010), which points out that only 5% of soldiers addicted to heroin who returned from Vietnam, relapsed within 10 months of returning home, and 12% relapsed briefly in a follow-up of 3 years. At the time these results were considered revolutionary, but it seems that today their importance has been forgotten, since the definition of addiction based on the conceptualisation of brain disease implies the chronicity of this condition.

Satel and Lillienfeld (2014) criticise psychiatry for using the terms disorders or syndromes, and not diseases, for psychiatric disorders in general, so it does not make sense to talk about brain disease, but rather brain disorder. The brain and the mind cannot be considered independently, as if one were on one side and the other on the other. A feeling, a thought, a desire, produces a change in neurons and brain circuits, and the brain does not act on its own. Anyway, the DSM-5 is already going in another direction.

Other criticisms in the same line can be found in Hammer et al. (2013), Levy (2013), Pedrero (2015), Trujols (2015), etc.

WHY HAS THIS MODEL ADVANCED SO FAST?

It is strange that a model that is so weak due to the data that support it, as we have discussed, while very suggestive, due to its simplicity and reductionism, has advanced so quickly. In our opinion, after it was formulated and sponsored by the NIDA in the United States, it has expanded both there and in other countries, including Spain, for several reasons, which we indicate briefly below.

1) *Generous funding, from the NIDA, to research that supports the model of brain disease and the clear assumption of a medical model of addiction, based on a biological substrate in the brain.*

We have already mentioned that the NIDA is prioritising research in this field and in this line especially as it is the agency that finances 85% of all drug research worldwide. In addition the DSM-5 of the American Psychiatric Association and the majority of scientific societies in the field of addictions have assumed this model, and these are usually biologicists, with all that this implies. In Spain the situation is similar, with an enormous advance of this model due to the underlying financing, its simplicity, the interest of pharmaceutical companies and the revolution in genetics accompanying in parallel to this model.

2) *The interest of the pharmaceutical industry to consolidate this model.*

Pharmaceutical companies have fertile ground in this model, as there are a large number of addicts and it is a good business opportunity, so much effort has been

devoted to it over the years. However, the results of drug therapy have been disappointing, since no new molecules appear to be useful for the treatment of addictions. And, at the same time frequent conflicts of interest appear among scientists and researchers as their declarations go beyond what the data indicates.

As Allen Frances (2013), chairman of the working group DSM-IV and an internationally renowned psychiatrist, says in his book *Are we all mentally ill?* "the commercialisation of disease cannot occur in a vacuum, it requires the pharmaceutical companies to have the active collaboration of the physicians that issue prescriptions, the patients that request them, the researchers that invent new mental disorders, ... A constant, ubiquitous and well-funded campaign in favour of "raising awareness of the disease" can create diseases where none previously existed. Psychiatry is especially vulnerable to the manipulation of the lines separating normality from disease because it lacks biological tests and greatly depends on subjective judgments that can be influenced by clever marketing" (p. 50).

The field of addictions is one of the fields in which it is easiest to find conflicts of interest with the pharmaceutical industry. The relationships of associations with the industry are often built with people who exercise leadership in these associations (Lichter, 1998). Often part of the curriculum of these leaders has been achieved based on their personal relationship with the industry, in so-called "special interest groups" (e.g., boards of scientific and professional societies, scientific journal editors or editorial boards, members of the elaboration of clinical guidelines). Thus, in the DSM-5 there have been significant problems of conflict of interest with many participants who were linked to the pharmaceutical industry (Cosgrove & Krimsky, 2012).

3) *The social construction processes of diseases and the case of addictions*.

It is society that gives the label of disease to a particular condition; that is, the disease is a social construction. In recent years we have witnessed a growing creation of new diseases or disorders and the resulting increasing medicalisation of abnormality (e.g., ADHD, bipolar disorder, Internet addiction, etc.). Therefore, the idea that we have socially regarding drugs will lead to the adoption or not of social measures, to the medicalisation or not of their consequences, to considering whether or not they are a disease, whether their consumption entails negative consequences (e.g., violence, citizen insecurity); and the stigmatisation of consumers (Slapak &Grigovaricius, 2006).

It is the individuals and groups who contribute to constructing the reality and perceived social knowledge (Berger & Luckman, 1966). Unlike the medical model, which assumes that diseases are universal and unvarying in time and place, the social constructionists emphasise how cultural and social systems shape the meaning and experience of falling ill (Conrad & Barker, 2015). This is especially clear in mental disorders, because getting ill, being ill, has both biomedical and experiential dimensions; some diseases are eminently social or cultural, some are stigmatised and others are not; some are considered disabilities and others are not. For example, dependence on antidepressants is authorised and dependence on other drugs is not (Kushner, 2010); the same occurs with Ritalin, a drug stimulant for the treatment of hyperactivity; SSRIs and ecstasy both act on the same receptors of serotonin. One would not produce a brain disease and the other would.

This has clear social and health implications, such as the recognition of disabilities, access to health care, creating research on the "disorder" or "disease", etc. But when it is not a "real" disease there is a risk that this will lead to its medicalisation. This has been encouraged in recent years by the pharmaceutical industry (Loe, 2004) which even goes as far as to create the need for its products in individuals through aggressive advertising (of drugs, of course). A current example is the DSM-5 conception of alcoholism.

4) *The psychological processes underlying the proponents of this model*.

The people who opt for the brain model of addiction have previously been professionally trained to understand people, their patients and the world in a certain way, usually facilitating biological reductionism or seeking the ultimate cause of a phenomenon in biological functioning. This in itself is neither good nor bad. But when the model is not entirely clear (e.g., it is not the same to say the cause of the flu is a specific virus, as it is to say the cause of addiction is the abnormal functioning of dopamine in the brain), and when individual professional and commercial factors may be present, it can lead to bias. For example, professional biological identification facilitates more a praxis guided by this model, together with professional prestige, with a specific methodology

and therapy, different from others, and with a biological interpretation of the results obtained.

In this sense, recent years have seen the passage of a growing number of medical field professionals working in addictions from a biopsychosocial explanatory model of "addiction" to a biological model (that of brain reductionism). Having a specific model, when it is useful, is good; but when it is reductionist and only partially explains part of the phenomenon, it is often inadequate and harmful to the users. This has been favoured because North American psychiatry -and also official psychiatry in Spain- is opting clearly and resoundingly for addiction as a brain disease, and although we know that this is not the opinion of all psychiatrists and physicians working in addictions, it is the dominant one at this time in the official documents of various associations and scientific journals on addictions. The worrying thing about it is the attempt to psychiatrise the conceptualisation of addiction and treatment, as if it were just another biological illness. We experience a clear example of this in Spain with the dual diagnosis, because if the person has a "disease" then psychiatric treatment (pharmacological, naturally) is "always" justified for the condition; which means forgetting about the problems that come with psychiatric overmedicating, increasingly criticised (Whitaker, 2015).

But when a person assumes a model, due to their life history, learning, necessity or consistency, there are several psychological processes that accompany them, and that we psychologists know well, such as selective attention, the effect of conformity (to the dominant group) and social pressure, confirmatory bias, selective attribution, self-fulfilling prophecy, moral license, the group identity (professional), decision-making and, above all, the process of reinforcement.

As an example of the above, the power of reinforcement applied to the actors involved in expanding this model is clear: they tend to be comfortable and consistent with it (learning history), with the idea of reducing all the symptoms to one illness, to be in a clearly identified professional group (reductionism and simplicity); and, most importantly, there is a clear reinforcement to assume it, in the form of self-reinforcement and external reinforcement (from colleagues, society, the pharmaceutical industry, patients, etc.). If they do not accept the dominant model they will face negative consequences or exclusion. In addition, there is a modelling effect because the people with the most prestige in their profession are the leaders of the movement.

This does not mean we do not recognise the value and the role the individual biological weight clearly has on having or not having an addiction. But it is not the only "cause" nor is it possible to explain all aspects of addiction only through biology. What we are criticising is precisely the reductionism of this model and the forgetting of the central weight of other factors, such as cultural, social and environmental factors (e.g., availability, social attachment), psychological factors (e.g., expectations, learning, self-control, personality), individual factors (e.g., sex, age), etc.

THE FUTURE OF THIS MODEL FROM THE PSYCHOLOGICAL PERSPECTIVE

There have been many contributions of psychology to the understanding, assessment, prevention and treatment of addictions. Naturally, from a psychological or biopsychosocial model, our professional training leads us to understand human beings in a comprehensive way, not biased or reductionist. The psychological contribution to the understanding and treatment of addictions has been and remains clear, highlighting for example motivational techniques, techniques of psychological dishabituation and techniques of relapse prevention, among others (Becoña, 2016). Therefore, the brain model of addiction, due to its reductionism, is not acceptable from the psychological perspective, and although we do not deny the role of biology, we do deny its exclusivity and its simplistic attempt to understand the complex phenomenon of addictions. As Hall et al. (2015) say, "Addiction is a complex biological, psychological and social disorder that needs to be addressed by various clinical and public health approaches" (p. 109).

The future is always open and we cannot predict it exactly, but if this continues, we will see in the short term a biological-brain reductionist conceptualisation of all addictions. Some embrace this model almost like a religion and silence the critical voices, of which there are many, but they are not the ones with the power, the money, the means, or the public access. What we mentioned at the beginning of this article is very striking, that 94 important scientists and clinicians from different countries around the world would write a letter to the editor of *Nature* denouncing this model and the attempt to make it predominant. It would be strange for thousands of intelligent scientists, professionals and clinicians to be wrong about the cause of addiction. It therefore seems that sometimes we are facing more of

an ideology than a consistent model or paradigm (Vreckro, 2010). Although we are optimistic in the long term, because in the end reason always seems to prevail, this process can take years, which means an increase in the suffering of people with addictive disorders. In psychology it is clear that we cannot accept this model as formulated, because it is simple, biased, interested, reductionist, not based on the existing scientific data on addiction or the biopsychosocial model and also it does not help the interests of consumers or addicts. This model skirts around the main issues, leaving in second, third or fourth place, the role of the environment, psychological factors, etc., denying the reality of the scientific information accumulated over decades and decades of research.

It is curious that the dominant perspective in the field of addiction not so many years ago was psychological. But psychology is aimed at helping the human being, not at creating a technology that can make a profit or patents, or create products based on it. Nor was it believed that some of the people who assumed the biopsychosocial model, upon which the science of addiction has been based in recent decades, had the audacity to propose such a radical reductionism or mask such reductionism within a biased approach by indicating that there are always individual or social factors that frame this brain disease. But it has happened, with no consistent arguments being heard and even without anyone to argue from this reductionist model that the biopsychosocial model anachronism must be abandoned (Cabanis, Moga & Oquendo, 2015).

We believe the data should prevail over beliefs and interests, so we conclude that the psychological contribution to addictions has been central and will remain so in the future. Brain-centred biological reductionism is not justified nor is it useful or appropriate for people with addictive disorders or for preventing addiction. In addition, this model cannot explain the entire complex phenomenon of addiction, but we must take it into account and, at the same time, produce our own data, more forcefully and more publicly and using the media, and we must not be fooled by a very well organised marketing campaign in favour of this model, in which it seems that what they are presenting is real and the other explanations for this complex problem do not exist. This is a new task that psychologists have to undertake in an urgent, persistent and incisive way.

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ONE IN FIVE? CHILD SEXUAL VICTIMISATION IN SPAIN

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Si bien la extensión de la victimización sexual infantil sigue siendo un tema de controversia, numerosos estudios internacionales confirman que se trata de un problema altamente frecuente, que afecta a un importante porcentaje de la población. El objetivo de esta revisión es presentar aquellos trabajos publicados en España sobre la epidemiología de esta problemática. Para ello, los trabajos se han clasificado en estudios de incidencia, estudios retrospectivos de prevalencia y estudios con muestras de menores. Los resultados indican que, a pesar de las voces contrarias a su reconocimiento, la victimización sexual infantil es muy frecuente, como se obtiene de las posibles víctimas mediante estudios de autoreporte. Como conclusión, se alerta a los profesionales que trabajan con niños y niñas de su papel en la detección y notificación de estos casos, así como se subraya la responsabilidad de la Administración en la subvención de estudios de alcance nacional.
Palabras clave: *Epidemiología, Abuso sexual, Incidencia, Prevalencia, Victimización sexual.*

While the extent of child sexual victimisation remains a subject of controversy, numerous international studies confirm that it is a highly prevalent problem that affects a large percentage of the population. The objective of this article is to review the studies about the epidemiology of child sexual victimisation published in Spain. The studies were classified into the following groups: studies of reported incidence, studies of prevalence and studies in which the data are obtained directly from children. The results indicate that, despite the voices that refuse to recognise it, child sexual victimisation is a frequent problem. In conclusion, the role of the professionals who work with children in the detection and reporting of these cases is emphasised as well as the responsibility of the government to fund national-level studies.
Key words: *Epidemiology, Sexual abuse, Incidence, Prevalence, Sexual victimisation.*

Establishing the extent of child sexual victimisation remains a subject of controversy, even though the constant publication of rigorous studies and meta-analyses worldwide has led to the conclusion that this is a problem that affects a large percentage of children and adolescents. However, many critics still refuse to recognise this reality.

To date three meta-analytical studies have been published, conducted with community samples, which have very similar figures and allow for a reliable description of the phenomenon. The first was published in 2009 by Pereda, Guilera, Forns and Gómez-Benito and states that 7.9% of men and 19.7% of women report having been the victim of some form of sexual abuse or assault, with or without physical contact before the age of adulthood. This study comprised 65 articles published between 1965 and 2006, with samples from 22 different countries, including Spain. Similarly, Stoltenborgh, van IJzendoorn, Euser and Bakermans-Kranenburg (2011), analysing 217 papers published between 1980 and 2008 and concerning countries on five continents, show a percentage of sexual victimisation that affects 7.6% of men and 18.0% of women throughout their childhood. The most recent one by Barth, Bermetz, Heim, Trelle and Tonia (2014) presents the results of 55 studies, published between 2002 and 2009 with samples from 24 countries. The authors found that 8% of men and 15% of women have been victims of sexual abuse with and without physical contact.

These notable works have confirmed that the sexual victimisation of children is a serious problem that affects all societies that have been studied, at a rate that does not vary greatly between studies and stands at 8% of men and about 20% of women. However, it is true that for many professionals these studies may seem far from the Spanish reality, so this review aims to show the results obtained in Spain regarding the extent of the sexual victimisation of children, in order to present, objectively and rigorously, the reality of this problem in our society.

THE INCIDENCE AND PREVALENCE OF CHILD SEXUAL VICTIMISATION

It should be noted that the studies that have analysed the extent of sexual victimisation of children use different

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methodologies that are often interpreted wrongly, giving rise to confusion in understanding the results and hindering their correct analysis. To overcome this difficulty, it is essential, first, to differentiate between incidence studies and prevalence studies.

STUDIES ON THE INCIDENCE OF CHILD SEXUAL VICTIMISATION

Incidence studies in this area show the number of new cases that are reported to the authorities or detected by them (e.g., hospitals, social services, police, justice) over a period of time, usually one year (Runyan, 1998; Wynkoop, Capps & Priest, 1995). The underestimation of sexual victimisation with this method of study must be emphasised. The incidence does not provide in any case, the actual occurrence of victimisation (Leventhal, 1998). Factors such as the secrecy that characterises the situation, the embarrassment experienced by the victim in relating what happened, the criminal sanctions involved in the reporting of these cases, and the young age and dependence on the adult that characterise these victims, result in only a small number of minors reporting what happened at the time it occurs, it being more than likely that the official statistics underestimate the real dimension of the problem (Goldman & Padayachi, 2000).

In relation to this underestimation, studies have found that only a small percentage of cases of sexual victimisation are reported to an official service when they occur. As an example, in the work of Priebe and Svedin (2008) on this issue, although the victims say they have talked about the experience with someone close, only a small group of them report having discussed it with a professional (3% of men and 9% of women) or having reported it to the police or social services (4% of men and 7% of women). The review by Ullman (2001) confirms that the vast majority of victims wait until adulthood to reveal the sexual victimisation (42-75%) or never tell anyone about it (28-60%). The fear of negative reactions in the environment, the desire to protect the family and the fear of threats from the aggressor, among other things, are the reasons that make the victim remain silent.

If we focus on the incidence studies published in Spain, it appears that these have been carried out, mostly, using data from the Social Services of the different Autonomous Communities (Moreno Manso, 2002).

One of the few incidence studies of national scope that have facilitated the quantification of this problem is the work by Saldaña, Jiménez and Oliva (1995). These authors reviewed all (32,483) of the files opened by child protection services for children of the different regional administrations in 1991 and 1992. The total number of children experiencing some form of abuse was 8,565, representing an annual average of 0.44% of all Spanish children. In relation to child sexual abuse, the number of children affected was 359, corresponding to 4.2% of all abused children. Gender differences are evident in these cases, with girls representing 78.8% and boys representing 21.2% of children identified as victims of child sexual abuse.

With a similar methodology, in 2002 the *Centro Reina Sofía para el Estudio de la Violencia* [Reina Sofía Centre for the Study of Violence] published an analysis of 32,741 cases of child protection services in all of the Spanish autonomous regions, between 1997 and 1998. In this study, there were 16,189 detected cases of child abuse at national level (0.71% of the total Spanish population under 18 years), 3.6% had experienced some form of sexual victimisation, defined as any behaviour in which the child had been used as a means for sexual stimulation or gratification (Sanmartín, 2002). In turn, of these victims, approximately 81% were girls and 19% boys.

These percentages, as it can be seen, are significantly lower than those which, according to meta-analysis studies, should be found if the goal is to understand the real extent of child sexual victimisation. Therefore, it can be concluded that incidence studies based on official statistics do not show all cases of sexual victimisation that exist, but only those that are known by the authorities or certain groups of professionals. In turn, these studies do not show the actual characteristics of childhood sexual victimisation, but rather those of a specific sector of society, i.e., the people attended by professionals, such as social services, or the cases are detected more easily since they are already known by them. Thus, incidence studies should never be used as indicators of the extent of the problem of the sexual victimisation of children, but rather as an example of the capacity for professional detection of this phenomenon in a given context.

STUDIES OF THE PREVALENCE OF CHILD SEXUAL VICTIMISATION

Prevalence studies show more realistically the percentage of sexual abuse and violence that exists in society and refer to the number of individuals who have suffered throughout their childhood, usually considered

up to the aged of 18, although this criterion can vary depending on the study (Runyan, 1998; Wynkoop et al., 1995).

In Spain, the studies that have directly asked victims about their experiences of sexual victimisation are relatively numerous and have focused on the analysis of information provided by adults, obtained using a retrospective methodology. From an epidemiological perspective López (1994) and López, Carpintero, Hernández, Martín and Fuertes (1995) surveyed a representative sample of 1,821 adult citizens of the Spanish population and found that 18.9% of respondents, 15.2% of men and 22.5% of women reported having been victims of this experience before the age of 17. Among the characteristics of victimisation, the authors found that the most frequent behaviours were fondling below (58%) and above (59%) the waist, followed by propositions of sexual activity and exhibitionism (33% for each). It should be noted that 16% of men and 15% of women reported having suffered, at any moment during the experience, oral, anal or vaginal penetration.

Other studies, conducted with university students from different areas of the country have very similar figures, including behaviours with and without physical contact.

For example, the study by De Paúl, Milner and Múgica (1995) with 403 university students in the Basque Country shows that child sexual abuse affects 13.4% of the sample (9.7% of males and 14.9% of women). These figures vary depending on the age of onset of the abuse: 3.9% of men and 6.4% of women reported having been victims before the age of 13; 2.9% of men and 3.7% of women after the age of 13; and 2.9% of men and 4.7% of women before and after the age of 13.

Years later, Pereda and Forns (2007) conducted a similar study with 1,033 university students in Catalonia. In this study, the prevalence of sexual abuse before the age of 18 was 17.9%, affecting 15.5% of men and 19.0% of women. These abuses occurred before the age of 13 in 14.9% of the sample and between the ages of 13 and 18 in 3% of the sample.

The most recent prevalence study to date is that by Cantón and Justicia (2008) who after surveying 1,162 students at the University of Granada concluded that 9.5% of their total sample, 6.5% of men and 10% of women had been sexually abused before the age of 13, illustrating the severity of a problem that, as can be seen, affects a significant percentage of the Spanish population regardless of the geographical area analysed.

However, one cannot ignore that these studies are retrospective, i.e., they ask their participants about experiences that occurred in childhood, which prevents us from understanding the current reality of childhood sexual victimisation and analysing the phenomenon at the moment when it occurs (Goldman & Padayachi, 2000).

STUDIES OF SEXUAL VICTIMISATION WITH SAMPLES OF MINORS

Given the above difficulties, recently the need has been emphasised to ask children themselves about victimisation experiences occurred in childhood, producing their perception of the situation and allowing, in some cases for the first time, the reporting of this type of cases. This methodology, which emphasises the importance of asking children about situations of violence, argues that not including the child in such studies makes it difficult to obtain relevant information for the prevention and treatment of this problem (Becker-Blease & Freyd, 2006; Carroll-Lind, Chapman, Gregory & Maxwell, 2006).

It should be stressed that interviewing children and adolescents about these types of experience requires a rigorous methodology, instruments with adequate reliability and validity, taking into account the age of the children, and the technique must be based on a theory in which victimisation is defined properly, by experts on the subject. In turn, clear ethical principles must be assumed, based on which the professional must undertake the obligation to notify upon detection of such cases. It is clear that science and its requirements should always be placed in a lower position than the best interests of the child. To do this, there are several guides whose instructions must be followed throughout the project (e.g., Save the Children, 2004; UNICEF, 2012).

In Spain, one of the publications that included minors in its sample is the report carried out by the Reina Sofia Centre for the Study of Violence, published by the Ministry of Health, Social Policy and Equality (Sanmartín, 2011). After surveying 898 children aged 8 to 17 on multiple forms of victimisation, based on an instrument that was created ad hoc for the purposes of the research, a prevalence of 0.89% of sexual abuse in the previous year was obtained. This prevalence resulted from a single question, which includes being a victim of molestation, harassment, being subjected to sexual exhibitions and sexual advances, and uses the term sexual abuse to clarify or identify the facts.

Unfortunately, the previously cited work does not meet the methodological requirements for the study of sexual victimisation in children. As an example, it has been found that the use of questions with broad definitions is associated with lower prevalence rates than if the questions applied were aimed specifically at evaluating certain forms of behaviour. The number of questions asked also influences the results obtained and shows that the greater the number of questions, the higher the number of reports by potential victims (see the works by Fricker, Smith, David & Hanson, 2003; Goldman & Padayachi, 2000; Wyatt & Peters, 1986 on the characteristics of the questions and their influence on the prevalence of sexual abuse). This may be the reason for the huge discrepancy between the prevalence found in this study, and those obtained in previous retrospective studies.

Therefore, having a solid methodology, which frames the research with minors, is of great importance. In this sense, the works that have emerged from the theory of developmental victimology (Finkelhor, 2007) have yielded a real description of child sexual victimisation in different countries and based on reports from the boys and girls themselves, with all the necessary guarantees of protection and safety.

For this, a fundamental step has been the use of an instrument that evaluates a wide range of forms of victimisation, including sexual victimisation, and that takes different behaviours into account, measured by specific questions, appropriate to the age of the children. Following this perspective, several research teams have established the prevalence of sexual abuse from the reports of the children themselves with the same instrument, the Juvenile Victimization Questionnaire (Finkelhor, Hamby, Ormrod & Turner, 2005), which contains a sexual victimisation module with six items that assess both physical contact behaviours, and exhibitionism and sexual propositions.

In the United States, the study by Finkelhor, Shattuck, Turner and Hamby (2014) shows that sexual victimisation has affected 26.6% of girls and 5.1% of boys, throughout their life, out of the 2,293 respondents between the ages of 15 and 17. Regarding the prevalence in the last year, the authors found 5% of victims out of a total of 4,000 children aged between 0 and 17 by telephone interview with them, or their primary caregivers, depending on the child's age, distributed as 4.1% male and 5.9% female (Finkelhor, Turner, Shattuck & Hamby, 2015). Meanwhile, Cyr et al. (2013) in Canada obtained a figure of 8% for sexual victimisation throughout life and 5% in the last year from their 2,801 respondents, aged between 2 and 17 years. In this case, children under 12 were not interviewed, but the interview was carried out with their parents or primary caregivers. If we focus on Europe, Radford, Corral, Bradley and Fisher (2013) show in their study conducted in the United Kingdom that 12.5% of boys and 20.8% of girls interviewed between the ages of 11 and 17 from a sample of 2,275 children had been victims of some form of sexual victimisation by an adult or peer throughout their life. With regards to the past year, the authors obtained a percentage of 9.4%, affecting 6.8% of the males and 12.2% of the females interviewed.

SEXUAL VICTIMISATION STUDIES WITH SAMPLES OF MINORS IN SPAIN

In Spain there have been several studies published from the perspective of developmental victimology using the Spanish adaptation by the *Grupo de Investigación en Victimización Infantil y Adolescente* [Research Group on Child and Adolescent Victimisation] from the University of Barcelona of the instrument cited above, showing the percentage of sexual victimisation in different groups of children.

In this sense, it is important to note that there are samples of children with particular characteristics that must be considered to determine their specific risk of victimisation and these samples have been poorly studied at nation level.

With a community sample of 1,107 young people aged 12 to 17 surveyed in seven Catalan schools Pereda, Guilera and Abad (2014) obtained a sexual victimisation rate of 14.7% throughout life, relating to 4.1% of boys and 13.9% of girls. Among the forms of sexual victimisation assessed, there were physical contact behaviours, which affected 3.3% of the sample and behaviours without physical contact, reported by 6.2% of the sample. In turn, 5.3% of the young people said they had been victims in the past year, 2.2% of boys and 8.9% of girls.

Focusing on the past year, Soler, Paretilla, Kirchner and Forns (2012) obtained, with a reduced version of the instrument and a sample of 722 Catalan adolescents aged 14 to 18, a prevalence of sexual victimisation in the last year of 10.7 % of boys and 22.4% of girls, although the aim of the study was to analyse the effect of

polyvictimisation on self-esteem and post-traumatic symptoms. This high prevalence, which does not correspond to that obtained in any other study that has analysed the general youth population, may be due to the social characteristics of the schools from which the sample was obtained and which limit the results, since they are not comparable with community samples from the same country or other cultural contexts.

In the same vein, Valencia, Játiva and Cerezo (2014), using the full version of the instrument, surveyed 109 adolescents aged 15 to 18 from nine secondary schools and day care centres in areas with social problems and obtained a result in which 12.8% of the sample reported some form of sexual victimisation in the last year, although its primary objective was to analyse the role of self-pity between victimisation and psychological distress.

Focusing specifically on at-risk groups, Pereda, Abad and Guilera (2015b) interviewed 149 adolescents aged 12 to 17 years, who attended 14 child and adolescent mental health centres in Catalonia, obtaining a result of 16.1% of the sample, 5.7% of boys and 21.9% of girls, who reported some form of sexual victimisation. The percentage of sexual victimisation with physical contact was 11.4% and the figure was 10.1% for experiences without physical contact. Regarding victimisation in the last year, this affected 7.4% of respondents, 1.9% of males and 10.4% of females.

In turn, with a sample of 101 young people between the ages of 14 and 17 recruited from three closed juvenile justice centres (77.2%) and five open measure teams (22.8%) in Catalonia, Pereda, Abad and Guilera (2015a) found a rate of sexual victimisation throughout their whole life of 15.8%, relating to 42.1% of girls and 9.8% of boys. The percentage of sexual victimisation with physical contact affected 7.9% of young people, while 10.9% reported behaviours without physical contact. Additionally, 6.9% of the sample reported some form of sexual victimisation in the last year, 21.1% of girls and 3.7% of boys.

With a sample of 129 young people between 12 and 17 interviewed in 18 residential and care centres in Catalonia, Segura, Pereda, Abad and Guilera (2015) found that 29.5% of the adolescents said they had experienced some form of sexual victimisation throughout their lives, 14.1% of men and 44.6% of girls. Of the sexual behaviours included, 21.7% included physical contact and 15.5% referred to abuse without physical contact. Sexual victimisation in the last year was reported by 12.4% of the youths, 6.3% of boys and 18.5% of girls.

As can be seen, depending on the origin of the sample interviewed, the percentage of child sexual victimisation varies, although in all cases it exceeds the percentages found in the incidence studies based on official statistics.

DISCUSSION

The objective of this review was to present the recent studies on the extent of child sexual victimisation, focusing on those that affect the Spanish population, with the aim of highlighting this reality to the professionals in our country.

It should be noted that the Council of Europe itself, aware of the extent of sexual victimisation of children in different European countries, has promoted an awareness campaign entitled 'One in five', which summarises the percentages obtained in retrospective studies of prevalence and in the different meta-analyses published on the subject. As noted, if this source is taken into account, in Spain between 10 and 20% of the population has been sexually abused in childhood, usually before the age of 13. Studies conducted with community samples and university students confirm these figures, both nationally (López, 1994) and in specific regions (Cantón & Justicia, 2008; De Paúl et al., 1995; Pereda & Forns, 2007).

However, the figures are very different if the only sources of data collection considered are the official statistics. We must be aware that data from these sources only show the detection capability of professionals in a given society (Leventhal, 1998). The detected cases are not representative of the reality of child sexual victimisation, since not all cases are detected at the moment that they take place, but generally the ones that become known to the authorities are often the more serious cases and those from disadvantaged social environments (Runyan, 1998). This does not mean that these studies are not important, especially when they are national in scope, since they allow us to observe the country's level of professional awareness and capacity of detection and reporting; but they should not be taken as an indicator of the extent of the problem, since this would be a misinterpretation of the results.

A new line of study is one that in recent years has focused on directly asking children about their experiences of victimisation, both throughout their life and over the last year (Finkelhor, 2007). It should be noted that the analysis of juvenile records and retrospective

studies prevents us from knowing the true extent of child sexual victimisation, and does not allow us to analyse the phenomenon at the moment that it is happening (Goldman & Padayachi, 2000). However, this new form of work has significant ethical implications which must be respected. The obligation to report the cases that are discovered in the study, the importance of having as a basis a robust victimology theory for interpreting the results properly, and the need for a standardised instrument that has not been created ad hoc for a specific study, are requirements that must be followed if the aim is to obtain a real approach to the problem of child sexual victimisation, and not victimise the child secondarily.

In this sense, the first studies that have been carried out from this perspective, asking children directly about their experiences, show much higher sexual victimisation rates than those obtained from official statistics. It may be added that these percentages vary depending on the origin of the sample analysed and increase as we move away from the community population and interview young people from social problem areas (Játiva & Cerezo, 2014), those who have committed crimes and are in the juvenile justice system (Pereda et al., 2015a), children and adolescents with mental health problems (Pereda et al., 2015b) or minors that have been removed from their families under the protection system (Segura et al., 2015). In all of these cases, the prevalence of sexual victimisation outperforms the EU population and is particularly high in female victims.

The paucity of studies with samples that have some kind of physical or mental disability should be noted. In Spain, the work by Verdugo, Gutiérrez, Fuertes and Elices (1993) on this subject is noteworthy, although child sexual abuse is included only as one of the forms of abuse studied. The research notes the increased vulnerability of these samples to child abuse, especially high in people with intellectual and developmental disabilities, although the few studies carried out fail to establish the reliability of the data (see the review of Verdugo, Alcedo, Bermejo & Aguado, 2002).

It is important to be aware that the study of child sexual victimisation has a number of barriers and one of the biggest is the lack of grants for the investigations that are carried out. In this regard, there have been no studies of nationwide incidence for over ten years, so it is not known if the capacity of professional detection in our country has increased, declined or remained stable. This is important because it allows the evaluation of the evolution of awareness and training regarding this issue as well as seeing whether the economic crisis has had an influence on the number of reports and cases detected. In turn, there is only one retrospective prevalence study covering the national population, which was published over twenty years ago (López, 1994). We should advocate for national studies from the perspective of developmental victimology that allow us to understand the reality of child sexual victimisation based on reports from the children themselves.

CONCLUSION

In short, the sexual victimisation of children is a serious problem worldwide and also in our country. Denying the evidence encourages the problem to continue to remain hidden and means that thousands of victims do not receive the care and help that they need. The percentages vary mainly depending on the sex of the victim and the origin of the sample under analysis, although we place this experience between 10 and 20% of the EU population. The figures obtained refer to a large group of children whose experiences must be brought to light so that they can be recognised and accorded the resources and support they need. Science, through rigorous epidemiological studies and with a strong theoretical basis, should contribute to make this happen and the government should fund these kinds of studies, and assume that the knowledge of the extent of the problem is a fundamental step for the subsequent intervention with the victims.

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MYTHS OF POSITIVE PSYCHOLOGY: DECEPTIVE MANOEUVRES AND PSEUDOSCIENCE

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La Psicología Positiva (PsP) ha tenido un gran auge en los últimos veinte años. El objetivo del presente trabajo es enumerar una serie de mitos y maniobras argumentales falaces que siembran serias dudas acerca de lo novedoso y original de la PsP. En su discurso destaca lo pseudocientífico y una cierta deshonestidad intelectual. Además, disemina a través de redes sociales, libros y revistas especializadas, un conocimiento, se supone que empíricamente fundamentado, pero que en realidad está plagado de afirmaciones tautológicas, conocimientos superficiales y conclusiones evidentes. Todo el conocimiento generado por la PsP pone de manifiesto lo que aporta el sentido común sensato, y la razonable sabiduría tradicional. En conclusión, para esto, no hace falta la PsP y, además, se convierte, en cierta medida, en académica y socialmente innecesaria, irrelevante y prescindible. El trabajo finaliza con una serie de consideraciones acerca del incierto futuro de la siempre controvertida PsP.
Palabras clave: *Psicología crítica, Crítica de la Psicología Positiva, Maniobras estratégicas en discurso argumentativo, Mitos de la Psicología, Pseudociencia y Psicología*

Positive Psychology (PP) has experienced a huge boom in the last twenty years. The aim of this study is to list a number of myths and fallacious argumentative manoeuvres which sow serious doubts about the novelty and originality of PP. The PP discourse is notably pseudoscientific and has a certain intellectual dishonesty. Additionally, PP extends knowledge through social networks, books and journals. This knowledge is alleged to be empirically evidence-based, but in fact it is sustained upon tautological statements, superficial knowledge and obvious conclusions. All of the knowledge produced by PP reveals what it is provided by common sense and traditional wisdom. In conclusion, PP is not necessary in producing this knowledge and is academically and socially irrelevant and dispensable. This paper concludes with some considerations about the uncertain future of the always controversial PP.
Key Word: *Critical Psychology, Critique of Positive Psychology, Strategic Manoeuvring in Argumentative Discourse, Myths of Psychology, Pseudoscience and Psychology.*

This article is a response to what Professor Vázquez (2013) considers the "enemies" of Positive Psychology (hereinafter PP). The label of "enemy" is completely false. In fact, neither Pérez-Álvarez (2012), nor any of the authors of this paper, are "enemies" of anything. Another very different issue would be if being critical were equivalent to being an "enemy". In this sense, the authors could indeed be considered "enemies" of PP. It is true that Vázquez is interested in the "good name of Psychology" (p.91). He rightly recognises that "the reader does not deserve to be punished with parasitic discussions" (p. 91). The authors of this paper argue that psychology does not need either the deception of linguistic happiness or the false unfulfilled promises of psychological well-being.

It is imperative to be critical in order to find a perspective that does justice to PP. It must be a fair criticism, made with intellectual honesty and based on an epistemology of virtue. Thus, PP, as a new academic discipline, seems dispensable, and its discourse, exhausted. Since its theoretical and practical development in the late twentieth century, it has generated unwavering adherence and harsh criticism, wrongly understood at times. Abundant examples of critical bibliography can be found both in English (Binkley, 2014; Ehrenreich, 2009, Frawley, 2015; Ivtzan, Lomas, Hefferon, & Worth, 2016; Kristjánsson, 2013; McDonald & Wearing, 2016) and in Spanish (Cabanas & Huertas, 2014; Fernández-Ríos & Novo, 2012; Pérez-Álvarez, 2013; and Piña, 2014). From its content it is extracted that PP represents a confusing, uncertain and repetitive field of research-action.

This work is based on the theory of deceptive manoeuvres in the reasoning of Eemeren and Grosstendorstt (2003/2011), the use of the concept of fallacy by Sternberg, Kaufman, and Grigorenko (2008/2011), and the psychomythology of Lilienfeld, Lynn, Ruscio, and Beyerstein (2009/2010). The concept

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of myth that is adopted herein refers to a series of deceitful arguments about the theory and practice of PP. These are based on a mistaken history of PP, a fuzzy theoretical discourse, a dubious interpretation of the empirical data, and a series of deceptive manoeuvres regarding the discourse offered to the public. Thus, the emotional narrative of PP is based on a moving magma of tautological and repetitive statements. With these considerations in mind, our aim is to expose a series of PP myths that bestow it with a dubious scientific and social usefulness. Specifically, we have established two broad categories of myths. In the first, which deals with the historical and epistemological aspects, the originality of PP and its vision of the human being are questioned, and the limitations of its discourse are evident, as well as its lack of empirical foundation. In the second, focused on the myths concerning the need for PP, the discussion centres on the lack of ideological neutrality, its quest to become universally valid, and the false predicament of positive mental health; moreover, it is highlighted that it is dispensable for psychological practice, and in order to achieve happiness and social change. This work concludes by presenting a number of minimum issues to consider a critical future for PP.

HISTORICAL AND EPISTEMOLOGICAL MYTHS ABOUT PP

Myth: PP is philosophically and anthropologically original and recent

People have always had a need for a healthy and hopeful justification for the daily process of living. PP is on the one hand, a recycled version of "light" ideologies about happiness; and, on the other, an eclectic invention of the philosophies and anthropologies of the new age. The new age brings a DIY system of pseudopsychological beliefs and practices, as an alternative to goodness knows what. It focuses on human beings themselves, and with a holistic view of a supposed universal energy. It seems that the traditional lifestyle has become toxic. Apparently it contributes to developing human potential and overall health. What and how it creates is almost irrelevant. PP in the new age plays a psychological role for non-believers and people who are disillusioned with the society in which they have to live. Many positive psychologists have overlooked the history of happiness, many others have refused to critically reflect upon what they do with PP. They have been led astray by the "gurus" of research trends which, in this case, cloud the capacity for reflection and obstruct constructive criticism.

To consider PP as something new is to disregard the history of philosophical and anthropological thought. In this sense, many PP publications are deeply ahistorical. They provide knowledge in terms of what the researcher thinks they know, but can actually be utterly wrong. The defenders of PP attempt to distort history to justify the establishment of the foundations of a new discipline. They exhibit a presenteeism which recognises, solely and exclusively, the merit and value of the recent publications in the psychology of positivity, and forget the long-term history in philosophy and the anthropology of positive emotions. However, PP represents largely an imitation of what is already known. Therefore, the presenteeist and ethnocentric history of PP is false or, at least, inaccurate. Moreover, it is, on many occasions, the mere depiction of the history of common sense regarding happiness, and how to get it. An example is the theory of "the expansion and construction of positive emotions" by Fredrickson (2013) who postulates, simply, that the positive seeks the positive. To demonstrate that the positive leads to the positive, common sense and popular sayings will suffice.

Myth: PP uses a unified and coherent discourse that transcends the mere narration of positive emotions

The discourse of PP lacks consistency and uniformity, and provides a narrative of positive affect. On the one hand, it is full of *travelling concepts* (Bal, 2002) which, like nomadic concepts, pass from one discourse to another. The conceptual delimitation is distorted, and PP becomes a narrative full of scattered concepts with insecure and constantly changing semantics. In this regard, Ahmed (2010) believes that the word happiness is mobile and promiscuous. Thus, a hazy, uncertain and ambiguous interdisciplinary discourse is constructed that results in the absence of a unified field of action-research.

On the other hand, the texts of PP feed off the simple narratology of positive emotions, that is, a literature of positive psychology. This discourse of positivity creates the ideal social space for the penetration of a story of linguistic happiness. Whether or not this story is based on empirical data, it will always have a favourable audience. It cannot be denied that PP is discursively appealing. As is the narrative of happiness and positive emotions. However, in its discourse and the interpretation made of the results of the research, linguistic uncertainty and semantic games abound.

Consequently, one could argue that if the discursive horizons of positivity are nomadic, PP becomes changing and liquid; and even providing an elegant, friendly and attractive linguistic happiness, its discourse does not shy away from being redundant, circular, and ambiguous. PP exhausts its own language, and is full of platitudes.

Myth: PP constitutes empirically based scientific knowledge

The interpretation of the results of scientific research in general, and PP, in particular, is a hermeneutical process, and socially controlled. In PP, the interpretive hermeneutics of the data are full of ideology, multiple meanings and ambiguities. Thus, despite the enthusiasm that is seen in some sectors about the possibilities offered by the knowledge that emerges from the research in PP, Pérez-Álvarez (2013) rightly considers that the empirically substantiated truths produced by PP constitute "absolute trivialities" and "scientific small change" (p. 219).

A number of ideas are available to reinforce the above consideration. Firstly, an abundant circularity is seen in the interpretation of results, and explanations are offered for almost everything. In addition, on many occasions, attempts are made to explain the obvious. Secondly, there is the "projection of knowledge argument" (Stanovich, 2002/2003, p. 190), according to which supporters of PP project an interpretation of the data favourable to their beliefs. Thirdly, for the explanation of the dubious results, the perspective "on paradoxes" by Hempel (1965/1968) is applied: " *paradoxical* cases must be considered confirmatory or positive" (p.55). Consequently, when there are no clear results from PP investigations, they must be interpreted in its favour. Fourthly, and finally, there is the *truth effect* (Dechêne, Stahl, Hansen & Wänke, 2010), which argues that the repetition of an ambiguous statement or conclusion increases the likelihood that it will be judged as true. In short, too much unfounded speculation, interpretative alchemy and linguistic secrecy is observed. PP is more like a pseudoscience or an existential philosophy of the new age than an empirically-based knowledge.

An added problem to this lack of empirical rigour, is generated by the current mode of disseminating scientific knowledge. The pressure of university policy leads to publish in journals with impact, even when the articles conclude the obvious. The priority is to publish even when there is nothing relevant to say (Fernández-Ríos & Rodríguez-Díaz, 2014). This is a form of what Buela-Casal (2014) called *pathological publication*, which is a disease in the construction and dissemination of knowledge. As it could not be otherwise, in PP there also abounds a pathological publication of works which include irrelevant and repetitive information.

Myth: The conclusions derived from PP interventions are clear

In addition to those mentioned in the previous myth, intervention in PP suffers from much ideology and self-fulfilling prophecy, if not bias, in order to demonstrate, that is, put into practice a theory. Greater objectivity and empirical basis is needed. In any case, if the conceptual framework is unclear, the intervention planning also becomes uncertain and therefore the practice ends up leading to the same problems as the theory. As a result, the conceptual fuzziness of the theoretical discourse of PP is manifested in the results of the intervention in the form of ambiguous and dubious conclusions.

Thus, in the published literature, meta-analysis can be found for almost any conclusion previously established in the minds of the researchers. If someone wants to reach conclusions favourable to PP, they will find empirical evidence. If someone seeks the opposite, they will also find it. For example, Chida and Steptoe (2008) conclude that psychological well-being affects the survival of healthy and sick individuals, in spite of the "publication bias" (p.754). Boehm and Kubzansky (2012) claim that psychological well-being is positively associated with health behaviours, and negatively associated with behavioural pathology. Sedlmeier et al. (2012) declare that meditation has positive effects on health, although it is difficult to establish the magnitude of the effect size clearly. Zeidner, Matthews, and Roberts (2012) consider that social well-being correlates with emotional intelligence. Emotional intelligence is nothing more than "old wine packaged in shiny new containers" (p.22). Bolier et al. (2013) claim that interventions of PP enhance people's psychological well-being with an effect size ranging from small to moderate. The results are difficult to interpret, also due to "publication bias" (p. 17). Cheney, Schlösser, Nash, and Glover (2014) conclude that interventions from the perspective of PP produce "invisible" internal changes (p. 22). In addition, inadequate control groups and a lack of randomisation of participants "limit the conclusions" (p.23). Finally, Quoidbach, Mikolajczak, and Gross (2015) conclude that positive emotions may be favoured through visualising positive events, optimising positive situations, paying attention to the positive aspects of situations, and expressing and sharing positive emotions.

In summary, explanations and conclusions of all kinds are observed. A hodgepodge of interpretive hermeneutics that suggests serious problems in synthesising empirically-based information in PP. This is not because PP has "enemies" but because it generates too many anxieties about the outcome of the intervention.

Myth: PP has a holistic view of the human being in their life context

PP does not provide a comprehensive view of the human being. It has selected a number of strengths, but has forgotten many other important ones. For example, it has overlooked the importance of *nature* or the *ecological niche* and *geographic psychology* (Rentfrow, 2014). This would enable us to speak of a geographical psychology of happiness, which would contemplate the importance of nature or life context as a restorative environment. Furthermore, PP is characterised by an ethnocentric cultural worldview. It forgets or, even worse, marginalises the social, cultural and economic conditions of each cultural tradition. Thus it imposes, sometimes implicitly, a cultural imperialism, which is unfair, perverse and lacking in research ethics.

Myth: Despite psychometric evaluation, PP looks for identified lives; i.e., personal biographies, not statistical lives

The lives identified are individually and personally real, that is, they have a unique biographical narrative. In contrast, we cannot put a face to the statistical lives of average happiness, nor can we put a name, or any of the other attributes of personal biographies. Unfortunately, PP focuses on the latter. It is interested in large numbers of happiness, and comparison between individuals, groups, communities and societies. It is a serious error that PP persists in the impersonal neopythagoreanism quantification of statistical lives and overlooks the biographical history of the people (Cohen, Daniels, & Eyal, 2015; Schelling, 1968). The statistics of large numbers, i.e., *big data*, create categories of individuals and classify people, but do not understand them. In this sense, PP manifests excessive pride in the use of psychometrics, and the quantification of happiness. However, two issues must be considered. Firstly, despite the obsession with the reliability and validity of the instruments, there are multiple problems of everyday existence that are not psychometric issues but practical life situations. Secondly, the overuse of quantitative aspects in the search for an impossible existential objectivity may generate a pathology of quantification.

MYTHS ABOUT THE NEED FOR PP TO ENHANCE HAPPINESS AND PROMOTE SOCIAL CHANGE

Myth: PP is ideologically neutral and favours social change

PP has never been ideologically neutral, nor has it favoured social change. The consumption of information about positive emotions favours a sentimental and therapeutic culture. Thus, a political ideology of the positive and self-help books is marketed, deceptively, favouring a utopian and impossible struggle for self-realisation. It is the ideology of the consumer society of the positive. An emotional capitalism that establishes disciplines and knowledge to rule lives, emotions, hopes and expectations of well-being. An enormously lucrative business.

Thus, PP does not necessarily favour social change. Rather, it is a tool of the psychological culture of the capitalism of positivity to promote individualism, the prevailing conservative ideology, and the happy entertainment of the upper classes. It defends, following Foucault (2004/2009), a biopolitics of positivity which establishes regimes of truth for a policy of positive health. Therefore a neoliberal discourse about happiness has been constructed, which turns PP into a control instrument of the psychological processes of happiness (Binkley, 2014).

Therefore, PP acts as a discipline of power and politics of truth that promotes a technology that instructs people in what they have to do to be happy. In reality, they end up imposing control and enforcement procedures in order to be happy in a certain way. The society of happiness and well-being indexes aims to provide citizens with pleasant care in a cultural climate that infantilises them, and makes them become dependent and docile. Thus, PP becomes a political weapon of psychological and ideological control, which does not provide liberating or emancipating empirical knowledge.

Myth: A theory and practice of PP that is universally uniform to all cultures is feasible

Culture is an inter-subjective representation of a number of values, ideologies, lifestyles and beliefs that establish a project of being-in-the-world. By simply being born into a culture or socio-material context of existence, the human being necessarily has a worldview. For any person, the world is their mental representation, socially constructed. Consequently, the concepts of happiness, subjective well-being and positive emotion are relative. Each culture sets up a single mode of thought in action and coping strategies that make a universal PP impossible. PP is culturally conditioned. What may be perceived in one cultural system as happiness, in another, may not be. One can even talk in some non-western cultural contexts, of a certain "aversion to happiness", as understood in the cultures of the advanced capitalist countries (Joshanloo & Weijers, 2014). Therefore, a PP is imposed, that should

adopt a multiplicity of cultural perspectives; which implies a relativistic approach to the theory and practice of PP. It cannot and should not impose cultural imperialism through the supposed science of happiness. A PP that seeks nonexistent universal laws of happiness, becomes a theoretical injustice, a practical impossibility, a betrayal of the epistemology of virtue, and a lack of professional honesty.

Myth: PP postulates a positive mental health that is highly healthy

PP is not always healthy. Moreover, there is a serious risk that its theory and practice result in a factory of psychological distress. On the one hand, positive psychologists do not promote, primarily, lifestyles oriented to *positive mental health*. In fact, they propose the classical model of deficit or vulnerability. It is in their interests that the person experiences an existential dissatisfaction, and problematises their daily subjective well-being. This state of existential anxiety places the person in the optimal conditions to consume the false positivity that is being offered. Therefore, before emphasising the positive, the fundamental issue for PP lies in the dramatising and problematising the negative aspects of the process of living. Thus, it behaves like the other type of psychology to which it attempts to offer an alternative, what is known as *negative psychology* (hereinafter NP); that is, it restores a mindset of creating psychological deficits in people, and establishing new pathologies of reason and social aspects. PP supposedly provides magic solutions to this anthropological, psychological and sociological fatalism. However, positive emotions existed prior to its discourse; the useful aspects of existential adversities and positive emotions have been known about since ancient times.

On the other hand, PP offers false hopes and, perhaps, many times, generates more disillusionment than happiness. The obsession with positive emotions, as well as the tyranny of satisfactory self-realisation, may be transformed into something pathological. When the irrational need to be happy becomes an epidemic, PP creates more social problems than it solves, to the point that one could speak of a pathology caused by PP. One example is the well-being syndrome (Cederström & Spicer, 2015), which materialises in the obsession with feeling good permanently.

Myth: PP is necessary for psychology professionals

For PP it seems that psychologists, before the emergence of the positivity discourse, were historically misinformed, misguided professionals and sadists who revelled in the problems of human beings. However, psychology has always been positive, as it has always tried to solve problems. Health professionals have constantly focused on helping to alleviate human suffering positively. The quality of life and well-being of people can be enhanced without knowing a thing about PP. For over a century, psychologists have worked on many occasions with great success without the explicit philosophy of PP. The only thing necessary is to know the history of psychology, to have a comprehensive knowledge of human beings and their life context, and to carry out psychology work ethically and appropriately. Over the years, health professionals have not been so heartless that they thought that humans only present problems. In short, PP is not a new paradigm or a new social movement, nor is it a genuine psychological theory. Therefore, it is psychologically dispensable when one has an optimal historical training, an open mind to the past, a comprehensive reading of classical wisdom, and a good dose of common sense.

Myth: PP is essential to enhance social happiness

PP is not intrinsically necessary in order for citizens to be happier. The question of happiness, individual and social, is as old as ideology, literature, religion, social medicine, cultural anthropology and, of course, psychology. In fact, the whole history of political ideologies, religions, philosophical systems, and world views is a product of humanity in order to be individually and collectively happier. It doesn't matter whether we speak of PP, or a political ideology of happiness, pedagogy of happiness, or ethics of happiness. What PP promises has been done historically by other disciplines. The recent problem of happiness is an ideologically constructed social invention (Frawley, 2015).

Moreover, when positivity experts reveal what citizens must do to be happy, all too often they pervert the psychological knowledge about positivity. Positive psychologists seem to have a hidden wisdom or some kind of miraculous elixir, apparently essential for human happiness. However, this way of thinking makes PP a psychological frustration and social disillusionment. Therefore, PP may be irrelevant, if not harmful, to the happiness of individuals, groups and communities.

FUTURE PROSPECTS: BEYOND PP

Considering all of the above, it seems appropriate to question what to do with PP. Although it is highly complex to glimpse into its future, there will certainly continue to

appear new literature on the philosophy, anthropology and sociology of happiness. In fact, it is observed that currently research in many different disciplines has turned towards happiness. The only relevant issue seems to be to talk about happiness, well-being and self-help. If PP focuses on the story of positive emotions, its future is assured, but more should not be expected from a psychological and scientific perspective. For this reason, next we will refer to a number of minor issues on the one hand, in order to try to build a PP that uses and disseminates a precise, clear and useful research-action discourse; and on the other hand, the issues are necessary in order to consider a critical future for PP.

First, it seems appropriate to conceive the future of critical PP based on the search for a solution of compromise which gives up preconceived and unchanging interpretive principles, and adopts a constructive attitude. Without finding a common space of dialogue, a sensible and responsible PP is impossible, and it must not promise what it cannot achieve. Greater integration is required in the discourse of general psychology, and fragmentations between NP and PP should be avoided.

Second, one must take into account the history of concepts or *begriffigeschichte* (Koselleck, 2004), which implies a historical analysis of the concepts, words and discourse used by PP. In this sense, PP describes and interprets history taking ancient or classical concepts into consideration, as if they maintained the same meaning today. However, each concept used in the discourse of PP (e.g., justice, happiness, etc.) has a multiplicity of meanings that gradually adapt to the changing reality. Consequently, the science of historical semantics helps us to keep in mind the history of the concepts used in the discourse of PP.

Third, it is becoming more complex to identify the specific goal of psychology in general, and PP, in particular. So PP needs to be more precise, less ambiguous, and it must give up trying to cover everything. The possession of the magic potion of happiness cannot be attributed to PP, and it must admit that there is no single truth. Positive psychologists cannot and should not impose, in an imperialist way, a dogmatic and universal truth. There are many truths in psychology, and innumerable truths in PP.

Fourth, it should adopt the "principle of parsimony" (Popper 1935/1985, p.136). Self-evident hypotheses abound and there is too much circularity (*ad exemplum*, subjective well-being correlates with perceived happiness). The aim is to avoid complicating things when they can be simple. Therefore, the rational use of the theory and practice of PP should be encouraged, and understandable, simple and useful explanations should be sought; and, in turn, it should be attempted to avoid the unnecessary plurality of concepts and conclusions that, not infrequently, are mere platitudes and deceptive manoeuvres in the pseudoscience of happiness. The explanations of PP ooze romantic scientism, i.e., unreachable dreams for a simple scientific explanation of complex phenomena (Brown, Sokal, & Friedman, 2014). Additionally, the excessive specialisation of PP language should be controlled. Actually, it is an experimental pseudo-philosophy of positive emotions. If this specialisation is unchecked, PP will become a body of knowledge, on the one hand, to enter the fraudulent business of self-help; and, on the other, to be confused with a new age philosophy of happiness.

Fifth, there is the matter of learning from what is known. It is necessary to expand the training of future psychologists in the history of the philosophy, anthropology and sociology of happiness. Thus, it could be shown that the texts of the struggle of human beings to be happy, historically speaking, have nothing to do with what is known as PP. From an in-depth reading of the Greek and Roman classics, intellectual humility and psychological relativism are acquired. Furthermore, the field of knowledge should be expanded with divergent readings. Always reading the same things is harmful to the intellectual health of the researcher and practitioner. PP has kept itself to itself too much, and persists in repeating content. Cronbach (1975) was right when he argued that psychologists would be better prepared if they read "more broadly about history, ethnology and the centuries of humanist writings on man and society" (p.125).

Sixth, the knowledge of two exciting fields of research must be incorporated and integrated. On the one hand, that extracted from the study of centenarians (Bishop, Martin, MacDonald, & Poon, 2010; Friedman, 2011; Vaillant, 2011; Whitbourne, 2010). And, on the other hand, consideration of the results of longitudinal work on invulnerability and resilience (Block, 1971; Elder, 1999; Masten, 2014; Werner & Smith, 2001). This would help to promote the development of positive emotions and quality of life.

Seventh, it is essential to consider the person as a whole, as it was done hundreds and hundreds of years ago, (Kashdan & Biswas-Diener, 2014); to be aware of the social, cultural and economic conditions of each culture; and to adopt a relativistic approach in the theoretical

discourse and professional practice. PP should not make pathologies out of normality, nor should it problematise everyday emotions in the process of living, or engender false hopes that result in higher levels of suffering and disappointment. In this sense, the best that all psychologists, positive and negative or however they want to be called, can do, is to return to the old statement of Hippocrates (1989), about the ultimate goal of all help, in this case psychological, which would be to "help or at least cause no harm" (I, 2nd constitution, 11).

Eighth, PP should attach greater importance to the following three aspects. Firstly, there are the risk factors that produce social pain, such as class struggle, social injustice, and the inequality of social power (Borsook & MacDonald, 2013) and social status (Cheng, Tracy & Anderson, 2014). Secondly, we highlight the sociological and anthropological research on post-material values, democratisation processes, individual capacity for freedom of choice, sense of personal fulfilment, personal flourishing, life satisfaction, empowerment, interpersonal trust, and individual autonomy (Diener, Inglehart, & Tay, 2013; Welzel & Inglehart, 2010). And thirdly, we should enhance the role of nature, the natural environment, as restorative resources to build health and quality of life in general, and positive mental health, in particular (Beute & de Kort, 2014; Blatt, 2014; Stokols, Perez Lejano & Hipp, 2013; Van de Vliert, 2013). Therefore, we must move beyond the current situation of PP. There are more strengths than are established by the evaluation of positive mental health.

Finally, in ninth place, one must keep in mind that what PP does could be done by the psychology of the *good life* (Bishop, 2015), *passion* (Vallerand, 2015), *moral personality* (Kristjánsson, 2013), *psychological capital* (Luthans, Youssef-Morgan, & Avolio, 2015), *the science of personality* and *the art of well-being* (Little, 2014), or even what has been called *experimental philosophy* (Lombrozo, Knobe & Nichols, 2014) of happiness and well-being. There is nothing in PP that cannot be done by another discipline that is already available (e.g., cultural anthropology, sociology, philosophy, anthropology, etc.).

CONCLUSIONS

The supposed theoretical and practical success of PP is relatively disappointing. Its theoretical discourse lacks originality, and the research findings do not have enough empirical foundation. Thus, the affective narratology of PP is a repetitive knowledge, full of common sense and unwritten philosophy from popular proverbs. In addition, PP claims but does not achieve scientific thoroughness, experimental rigour, and an ethical and ideologically neutral interpretation of the data. PP is not more original, and will not increase its empirical foundation, by publishing more of the same.

It is not clear that PP has been especially useful for academic psychology, and the confused social role of the psychologist. The theory and practice of PP have been tried, but the available evidence yields scientific and psychological results of little success. It is true that it provides an attractive language, one could say, a linguistic happiness, but almost nothing else. Its tenets end up being part of the fragmented psychological knowledge, like those of humanistic, phenomenological and existential psychology.

Possibly, this situation is nothing more than an example of the current disorientation of psychology itself in general. The aim of psychology is changing, liquid, and fluctuating depending on the interests of each historical moment. Psychologists would be mistaken if they let themselves be captivated uncritically by an insubstantial PP, full of tricks to deceive people; i.e., misleading manoeuvres and pseudoscience. PP without constructive criticism becomes a dead psychology, without hope and a producer of theoretical and empirical disenchantment. If this is not fighting for the good name of psychology, the real problem is within the defenders of the orthodoxy of positivity. Unfortunately, it does not seem productive to persist in the debate, when there is no will for consensus or agreement. However, denying the criticism or neglecting it generates the propitious environment for widespread scepticism about the theoretical and practical use of PP, and consequently, it is the best incentive in order to end up considering it unnecessary and dispensable.

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HAPPINESS AT WORK

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Uno de los principales objetivos de la psicología del trabajo y de las organizaciones es promover tanto el bienestar como el rendimiento de los empleados. Sin embargo, los distintos autores nos son unánimes respectos a los fundamentos de la felicidad. El objetivo de este trabajo es presentar las enormes contribuciones de la Psicología Positiva y de la Filosofía al tema de la felicidad y sus influencias en el ámbito organizativo y de la productividad, ofreciendo una revisión de los distintos autores, subrayando las diferencias entre ellos y, sobre todo, abogando por un consenso en el campo de los fundamentos de la felicidad. De hecho, la gran diferencia entre los distintos autores es la falta de unanimidad respecto a los fundamentos de la felicidad. Mientras algunos autores optan por un concepto de felicidad que se identifica con el de placer, otros prefieren una mezcla de placer, compromiso y significado, evitando, sin embargo, definir la felicidad o, más bien, ocultándola detrás de la palabra bienestar. Sin embargo, si se lograra un consenso sobre las distintas aportaciones al tema de la felicidad, éste representaría un concepto mucho más manejable desde la perspectiva psicológica.
Palabras Claves: *Bienestar laboral, Felicidad, Productividad, Tesis del trabajador feliz y productivo, Eudamionía, Edoné, Desempeño laboral, Bienestar.*

One of the main goals of work and organisational psychology is to promote the well-being and performance of employees. However, the different authors do not agree on the fundamental concept of happiness. The objectives of this paper are to present the enormous contribution of positive psychology and philosophy to the subject of happiness and its influence on labour and productivity, to review several scholars in this field, to highlight the differences among them, and, especially, to find a consensus on the fundamentals of happiness. In fact, the major difference among all the contributions is that there is no unanimity on the fundamental concept of happiness. Whereas some authors see happiness as "pleasure", others prefer the concept of happiness as a mixture of "pleasure", "engagement" and "meaning", avoiding the definition of happiness, and hiding it behind the concept of well-being. However, if a consensus were reached, it would represent a concept that could be better managed from the psychological perspective.
Key words: *Well-being at work, Happiness, Productivity, Happy-productive worker thesis, Eudaimonia, Hedonia, Job performance, Well-being.*

Human beings have always tended to pursue happiness as a goal or an end, as an ideal and permanent state of well-being at which to arrive. But, not content with a happy future at the cost of a miserable life, we want to be happy at every moment of our life. This permanent happiness, however, seems very difficult to achieve, if not impossible, for life is always providing us with situations that are characterised by their "contrariness", i.e., they are opposed to our likes, our interests and our calmness. If we feel happy at any moment in time, a reason for disappointment soon appears, or some circumstance that disrupts our well-being. It seems that happiness cannot be permanent, but rather it is composed of small moments, details experienced in daily life, and perhaps its main characteristic is futility, its ability to appear and disappear constantly throughout our lives.

What does it consist of, this happiness that we all pursue? Defining the concept is hard work. It is surely one of the most controversial and complicated definitions. As Kashdan, Biswas-Diener and King (2008) indicate, this is a "central concern" for humanity. The authors stress that several definitions can be found in philosophy, in religion, in cultural and political beliefs and values, and of course in psychology. However, they warn that psychologists synthesise ideas from other disciplines, although they are the only ones who provide a single united contribution to the concept of happiness and well-being. In fact, some authors (Diener, 1984) prefer to use a more manageable concept from a psychological perspective and speak of subjective well-being, which consists of three elements: a high number of personal satisfactions, a high number of positive feelings, and a low number of negative feelings. According to García Martín (2002), "There are many authors who have tried to define happiness or well-

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being. According to Diener and Diener (1995) these concepts can be grouped into three broad categories. The first describes well-being as the individual's assessment of their own life in positive terms. This group refers to "life satisfaction". A second category highlights the preponderance of positive feelings or emotions over negative ones... The last of these three conceptions, closer to the philosophical and religious approaches, conceives happiness as a virtue or grace."

Now, the subject matter is further complicated if we associate the concept of "happiness" with another complicated concept: "work". In fact, although there is no general agreement on the definition of happiness, scientists are very concerned about man achieving happiness, especially in the workplace because, as Duró (2009) states, "we work 56,000 hours and we live about 700,000". The new millennium goal is to be happy at work. As Hosie and Sevastos (2009) state, in the new millennium, happiness at work is presented as an issue of utmost importance. In fact, these authors point out that, in recent years, there has been an explosion of interest among researchers in analysing happiness, optimism and positive character traits. Moreover, a search conducted using a scientific database (ABI/INFORM) in September 2015, resulted in nearly seventy-eight thousand results, with a substantial increase in research since 2000. Another significant finding can be found on the Internet: for example if we do a Google search using the English words "happiness and work", in September 2015, more than two hundred and twenty-six million web pages appeared. This indicates, on the one hand, that the subject of happiness at work is one of the topics of most interest today, and secondly, it is very likely that there exists profound sadness at work.

In fact, the World Health Organization analyses estimate that by 2020 depression will be the second leading cause of work incapacity, and they indicate that at present 22% of the workforce in Europe (almost 40 million workers) are victims of stress due to work.

In order to better understand the work-happiness relationship we must encounter the world of positive psychology, which provides interesting insights. However, it should be noted that the method of positive psychology is not aimed at discovering the root causes of happiness, but only the empirical manifestations of what is usually meant by happiness: the experience of positive emotions (Tkach & Lyubomirsky, 2006). We note that it is not even possible to define this "phenomenon" in precise scientific terms since happiness consists of many different facets (Zelenski, Murphy & Jenkins, 2008).

So perhaps we must turn to philosophy for answers to the question of the nature and causes of happiness and to support the finding of a consensus integrating the two approaches to the study of happiness. For now we settle for two broad ideas from classical philosophy: a) happiness is a result of possessing goods that one loves; b) the person becomes what he loves. The human being aspires to attain many goods, but there is always one that he considers the most important, the absolute good, to which all others are subordinate, according to a hierarchy. It all depends on what that good is and the hierarchy established between the goods. If a person regards success as the absolute good, the happiness they can expect is that given by success. But also, in choosing that good as absolute, and in his subsequent conduct, the person decides about himself and makes himself. In this sense, every person has the happiness they want and becomes the person they want to be, according to the good or goods that they love and the order in which they love them.

POSITIVE PSYCHOLOGY AND PHILOSOPHY

Analysing the background of positive psychology, in a first approximation, it can be noted that this branch of research has as illustrious antecedents the ancient Greek philosophers who, like Aristotle, through the concept of eudaimonia (happiness), lay the foundations of a moral doctrine that identifies happiness with the possession of the good or, more specifically, to an activity of the soul in accordance with the virtue. In fact, as Vázquez (2006) states, "asking oneself about human well-being is not a fad. In a sense, Western philosophy has never had another central concern, either from the direct analysis of the substantive conditions of well-being (Aristotelian eudaimonia) or, more recently, from the analysis of the existential conditions that limit the scope of that ideal. Thus Aristotle, but also Spinoza, Schopenhauer, Bertrand Russell, Heidegger, and Cioran, have made this reflection on happiness one of the linchpins of thinking about "what it is to be human" (...) This new sensitivity to the scientific study of well-being, in a general sense, is not exclusive of psychology. The analysis of well-being and the pursuit of objective indicators concerning the social sciences as a whole (...) and dealing with human happiness within psychology is not a *fin de* siècle triviality."

Another author, Sanders (2003), shares the idea that the origins of positive psychology are to be found in the

Greek philosophers. In particular, the author warns that Aristotle pursues a practical knowledge regarding how to live well, developing all the capabilities that distinguish us as human beings and allow us to achieve *eudaimonia*, happiness or *flourishing*. Aristotle's question is very practical: what provisions should I acquire? These provisions - virtues - are settled and are shaped over time and custom. The cultivation of virtues will produce a happy man or woman.

Another Greek philosopher who spread the concept of eudaimonia in ancient Rome was Epictetus, a disciple of Socrates. Epictetus came to the conclusion that we can only achieve a full and happy life if we do the right things and live by the virtues, knowing how to distinguish between real and apparent goods (health, wealth, social position).

The concept of hedonism (Edoné) is associated with a Greek philosopher of the fourth century BC, Aristippus, who propelled the idea that the goal in life should be to experience the maximum amount of pleasure so that happiness would be represented as the collection of moments of pleasure.

However, there is no unanimity among the authors of positive psychology on the philosophical fundaments. Some seem to opt for the concept of *eudaimonia*, others for that of *hedonia*, and others prefer a sort of mixture of the two concepts. This is the case of Ryan and Deci (2001), who claim that the results of various investigations have shown that the concept of well-being is better understood if viewed from a multidimensional perspective, including the theories of hedonism and happiness (*eudaimonia*).

But Peterson, Park and Seligman (2005) indicate that for the purposes of positive psychology it is almost superfluous to focus on looking for what they call "the sovereign principle", located at the base of happiness, and they advise us to focus on the concepts of "pleasure" and "meaning" as "ways to achieve happiness". Furthermore, the authors extend the two classic ways, adding a third way: engagement. Consequently, they present a longitudinal analysis to measure the three factors that predict satisfaction, obtaining the following results:

a) Pleasure: 0.17
b) Engagement: 0.30
c) Sense and meaning: 0.26

As a result, they point out that the three "orientations" that lead to happiness are not incompatible with each other and can be pursued simultaneously in order to achieve it.

Therefore, we believe that positive psychology, trying to avoid as much as possible the potential "clashes of values" (Bacharach, 1989), represents a valid justification, from a philosophical perspective within the theoretical framework of the two schools mentioned and, furthermore, it can serve as a theoretical framework for harmonising the two philosophical currents. In fact, other authors have already pointed out that "regardless of whether well-being has a two-factor structure or not, what the two approaches have in common is the assumption that the hedonic and eudaimonic elements are part of the same overall structure of well-being, and they are interrelated" (Peiró, Ayala, Tordera, Lorente, Rodríguez, 2014).

THE NATURE AND SIGNIFICANCE OF POSITIVE PSYCHOLOGY

Interestingly, in a few years, positive psychology has aroused a keen interest in academic and professional circles, hundreds of scientific papers have been written (in academic journals or non-academic magazines) and a large number of books devoted to the topic have appeared. According to Marujo and Neto (2008), the positive psychology movement "created a momentum with important implications for research, psychotherapy, education and other areas, all of which had an impact on professional and academic life, and hopefully, in an even more general way, they will impact our social worlds and the quality of our lives. "

But, what is positive psychology? Sheldon and King (2001) define it as "the scientific study of the virtues and strengths of people dedicated to analysing the 'average person' but with the focus on discovering what works well and what can be done to improve". The goal of positive psychology is to improve the quality of life and prevent the onset of mental disorders and other diseases, with emphasis on building skills and prevention.

For Gable and Haidt (2005), it is the "study of the conditions and processes that enable individuals, groups and institutions to be able to thrive and operate optimally." According to these authors, "the goal of positive psychology is the study of the other side of the coin –the way in which people feel good, show altruism and create healthy families and institutions, dedicated to analysing the full spectrum of human experience."

When people refer to the term positive psychology, it tends to be interpreted as a new wave of spiritual philosophy or a new miraculous self-help method of the many that pervade the market. However, it only takes a little interest in the concept to understand how far these

assumptions are from reality. Positive psychology is but a branch of psychology that, with the same scientific rigour as the rest of psychology, focuses its attention on a field of research and interest different from that which is traditionally adopted: positive human qualities and characteristics.

We should ask ourselves whether positive psychology is a philosophical or empirical science. It is well-known that there is a branch of philosophy known as philosophical or rational psychology, which in many cases is equated with philosophical anthropology. This part of philosophy does not have as its direct mission to improve the quality of life or cure mental illness. Its goal is to understand the root causes of man's being, his cognitive and affective faculties, etc. In this sense it is a theoretical, not a practical, science. There is also empirical psychology which, based on observation, aims to cure certain mental illnesses. Well, we think positive psychology really belongs to the realm of empirical psychology, but has a much more pronounced philosophical dimension than "negative" psychology; a dimension that can vary from one author to another, and on which its proposals are based. In leaving out the objective of directly addressing pathologies, its empirical burden is less. And the fact that it seeks ways to improve quality of life leads this branch of psychology to wonder what makes a person happy, which is a philosophical question itself. Therefore, we believe that the key to success of positive psychology lies precisely in the philosophical basis adopted, i.e., rational psychology, which it takes as its starting point. If it begins with an appropriate anthropological conception, its proposals can be very valuable in improving the quality of life of the individual. If, on the other hand, it begins with a flawed anthropology, its solutions could be counterproductive for the individual, thus achieving the opposite of what it intended. The problem is that the authors of positive psychology, in general, do not make the philosophy behind its proposals explicit.

THE IMPORTANCE OF POSITIVE FEELINGS

One of the most interesting aspects studied by positive psychology is that of feelings. This is a very broad and extremely complex field. So here we will limit ourselves to present the ideas or conclusions of some -very few- authors, on the importance of feelings for a happy life and especially for a happy life at work.

Among the researchers of positive psychology, we note the very pioneering work of the psychologist Barbara Fredrickson, who, among other things, presents the "open and constructed theory of positive emotions", in which she shows that (2001) " positive emotions broaden the repertoire of ideas and actions of individuals, which, in turn, serve to create enduring personal resources, including intellectual, physical, psychological and social resources.

Vecina-Jiménez (2006) correctly notes that Barbara Fredrickson has opened a line of research focused specifically on positive emotions and their adaptive value. In particular, the open and constructed theory of positive emotions holds that emotions such as joy, excitement, satisfaction, pride, complacency, etc., although they are phenomenologically different, share the property of expanding people's thinking and action repertoires and building reserves of physical, intellectual, psychological and social resources available for future times of crisis. Experiencing positive emotions is always pleasant and enjoyable in the short term and, for this author, it also has other more lasting beneficial effects, to the extent that it prepares individuals for harder times ahead.

According to Seligman (2003), a positive attitude makes us adopt a way of thinking that is totally different from the negative attitude. Thus, while the negative, cold mood activates a way of thinking focused on what is bad in order to then remove it, the positive mood moves people to adopt a way of thinking that is creative, tolerant, constructive, generous, relaxed and lateral. This style of thinking aims to highlight what is good, not what is bad. It does not change course to detect errors, but it fine tunes itself to seek virtues.

According to Friedrickson and Losada (2005), there is a broad spectrum of scientific research documenting the adaptive value of positive emotions. In particular, experiments in the field of Positive Psychology have shown that good feelings:

- ✔ change the outlook of the person, broadening the scope of attention, widening behavioural repertoires, and increasing intuition and creativity;
- ✔ modify good bodily sensations, aiding recovery from the after-effects of cardiovascular problems, and altering the frontal brain asymmetry;
- ✔ protect physical and mental health, increasing the capacity to face adversity, increasing happiness, allowing psychological growth, reducing the level of hydrocortisone (cortisol), inflammatory stress responses and physical discomfort, increasing resistance to rhinovirus and reducing seizures;
- ✔ increase the chances of a longer life.

In addition, as stated by Seo and Barrett (2007),

positive emotions can constantly affect the three dimensions of motivation, helping to choose the direction (selection of an action), appropriately dosing the effort required to carry out the action (intensity of action), and finally acting with perseverance to achieve the selected target (duration of action).

In fact, the empirical study conducted by Erez and Isen (2002), clearly indicates that the people who participated in the experiment and were in a good mood, scored better than participants who were in a neutral mood, demonstrating a higher level of perseverance, greater engagement and higher levels of motivation.

Another empirical study by Marks (2006) on 2000 British workers, confirms that individuals who experience positive emotions scored more positively on key performance indicators such as job satisfaction, meaning of work, cognitive and physical engagement, loyalty and productivity. The author emphasises that positive emotions are not only the result of doing things right, but they even increase the potential to do things well in the future.

Judge and Erez (2007), trying to explain the obtaining of better results by positive workers, believe that this phenomenon may be related to the following:

1. The cheerful person usually has positive affect, and this, in turn, leads them to think better, to make better decisions, to be more creative and to be more motivated to cooperate and help more and, in general, to obtain better results in a wide variety of tasks;
2. The cheerful person attracts more and better companions;
3. The cheerful person participates in more activities and faces work with more vigour, more energy and greater initiative.

Finally, Boehm and Lyubomirsky (2008) note that empirical research has made it clear that positive emotions:

1. positively affect negotiations;
2. positively affect the individual level of optimism;
3. reinforce individual relationships;
4. predispose people to help others;
5. can positively affect originality and flexibility;
6. stimulate joy, exploration and creativity.

THE INFLUENCE OF FEELINGS IN THE ORGANISATIONAL FIELD

It is important to note for the purposes of our study that researchers in the field of positive psychology acknowledge that positive emotions can not only transform individuals, but can also act at the organisational level. In particular, these authors argue that individual positive emotions can contribute to the transformation of organisations and communities, since emotions have interpersonal resonance. Therefore, by creating a chain of events that "transport" positive emotions between the different elements of the chain, these same emotions can transform organisations into more cohesive, more moral and more harmonious social organisations (Fredrickson, 2003).

In fact, as Páez, Campos and Bilbao (2008) indicated, there are at least five longitudinal studies that show that talking and sharing a positive experience with others reinforces happiness, beyond the impact of the act itself. This effect of "capitalisation or amplification of the positive impact" occurs more intensely if the people who hear the positive communication respond authentically, validating and accepting it, and the opposite occurs if the environment responds passively or destructively. In addition, the authors note that the amplification of positive emotions serves to strengthen the social relations that generate resources that facilitate altruism, reinforce affiliation, etc. In the same vein, another author, Myers (2000), notes that when we are happy, we are more ready to help others. In fact, psychologists call this fact "the phenomenon of feeling good, and doing good."

Other empirical studies (Fowler & Christakis, 2008) confirm this intuition and show that happiness can spread within a social network, from one person to another, until it reaches three levels, reaching the conclusion that the happiness of people depends on the happiness of the people with whom they relate, and therefore happiness -like public health- must be considered as a collective phenomenon. Their research, which analysed the happiness of nearly 5,000 people over a period of 20 years shows that when a person is happy, the networking effect can be measured to the third degree. This means that a person's happiness triggers a chain reaction that benefits not only their friends but the friends of their friends, and the friends of the friends of their friends, up to the third level. In particular, the researchers noted that when a participant experienced a moment of happiness, a friend who lived within almost a kilometre and a half (one mile), had a 25% higher probability of reaching a state of happiness. A spouse who was living with them experienced an increase in probability of 8%, and siblings who live less than a mile away experienced an increase of 14%. For neighbours who lived next door, the increase was 34%. However, the most surprising result was obtained in

indirect relationships. While a person who entered a state of happiness increased the likelihood that the same would happen to a friend, a friend of that friend experienced a probability of almost 10% of increasing their happiness, and a friend of that friend had an increase in probability of 5.6%.

A BRIEF REFLECTION ON FEELINGS

As can be seen by what we just stated, the authors of positive psychology attach great importance to positive feelings, attitudes and emotions, and show that these positively influence people's quality of life and the quality of their work, both individually and organisationally. However, the abovementioned authors and others lack deeper thinking about feelings. Specifically, we believe it is not enough to know that positive emotions are very important, and should be encouraged in order to achieve a higher quality of life, but the following questions must be answered at least:

1. What are feelings? Answering this question is important, because there is a big difference in considering feelings as superficial organic reactions or as a phenomenon of a somatic-spiritual nature. The world of affectivity, as noted above, is complex, and to penetrate it requires deep knowledge of the human being. It is necessary to distinguish between actual rational affectivity (will) and sensitive affectivity, and to explain the interaction between them. Thus, the feeling of pleasure is not the same as the feeling of joy, although some authors seem to equate the two or at least not distinguish between them. If only sensitive affectivity were considered, it would not be possible to account for its origin or purpose. Hence the following question:
2. What is the relationship between positive feelings and rational human faculties? The person is "one" and none of its dimensions can be explained in isolation. Feelings occur with the knowledge of certain perceptible goods, but the one who knows and loves (or hates) is always the person. And as the person is (and this has much to do with their will and intelligence) they will appreciate positively or negatively the goods they know.
3. Who should direct the action ultimately: feelings or reason? There is a certain danger into which the exaltation of positive feelings may fall: it bestows upon them the ability to direct the life of the person, which lies exclusively with the very rational faculties. Feelings have, in our opinion, an eminently "auxiliary" but not a directive character. Well oriented or educated, feelings are a great help for the person to know the good that they must do and to put it into practice. We just used the words "well oriented or educated". Some people think that spontaneous feelings are always valuable precisely because they are spontaneous. But spontaneity is not a guarantee of value. Feelings by themselves (whether positive or negative) do not guarantee that what is being felt is good or bad for the person. Therefore, they must be educated to cooperate with reason and will in the knowledge of what is right and in its practical realisation. And that education is the "rationalisation" of feelings through prudence, which gives rise to two great virtues: fortitude and temperance. Which brings us to the next question:
4. What is the relationship between the moral life of the person and their feelings? If feelings are not educated by fortitude and temperance, they become an obstacle for the good, and therefore happy, life. But in order to educate their feelings, the person needs to have a real idea about the meaning of life and to be consistent with it. It is not that the person gives a "meaning" to their life, any meaning, but rather a meaning consistent with their being a person. If the meaning of life is summed up in the pursuit of money, power or success, their feelings will respond positively to these goods, but not to the need to help other people, to friendship, or to failure at work. Therefore, it is not enough to identify the factors that predict satisfaction. As we have seen, for some authors there would be pleasure, commitment, meaning and significance. It is necessary to know what pleasures are meaningful for the realisation of the person, what is the true sense or meaning that the person must give their actions and, finally, what commitments are worthy of the person and which ones are not.

All this leads us to affirm that the proposals of positive psychology must be completed with the appropriate rational psychology.

POSITIVE ORGANISATIONAL BEHAVIOR, A THEME OF POSITIVE PSYCHOLOGY

Another subject, closely connected to the branch of positive psychology, is positive organisational behaviour at work (POB), which, as indicated by the founder of the theory, Fred Luthans (2002), represents "the study and application of the strengths of human resources and their positive psychological capacities that can be evaluated, developed and managed effectively to improve employee performance." Positive organisational behaviour is based on five psychological strengths:

- ✔ *Self-efficacy*. According to Bandura (1997) -quoted by Salanova (2008)-, self-efficacy represents "beliefs in one's own abilities to organise and execute the courses of action required to produce certain achievements or results." According to this author, self-efficacy is a primary human strength with enormous potential to positively influence business management, as it can lead to:
  - ✔ Choosing positively.
  - ✔ Motivating and trying harder.
  - ✔ Being persistent.
  - ✔ Thinking positively.
  - ✔ Resisting stress.
- ✔ *Hope*: This is a positive motivational state that is embodied in the willpower to achieve goals and to plan how to reach them. According to Luthans (2002), quoting Snyder, hope does not only represent the individual determination that the objectives will be achieved, but also the personal belief that successful plans will be formulated and the right paths will be chosen to achieve the objectives.
- ✔ *Optimism*: This is an attitude which leads people to trust that everything that happens is good and positive. As Peterson (2000) indicates, optimism is associated with the thought that the social and material future will lead to a situation that the person considers desirable and that involves certain pleasures. Therefore, optimism does not intend to have a similar outcome for all, as it depends on what each individual considers desirable. Nevertheless, optimism is the force that drives people to achieve their objective, while pessimism is the force that drives us to defeat. In this regard, Luthans (2002) cites a survey from *MetLife*, an American insurance company, which shows that the agents considered to be more optimistic, over two years, managed to sell 37% more insurance policies than the agents that had been classified as pessimistic.
- ✔ *Happiness* or individual well-being: Luthans (2002) states that several meta-analytical investigations show that people who are satisfied with their lives also tend to be satisfied at work.
- ✔ *Emotional Intelligence*: the ability to recognise our own emotions and the emotions of others. According to Luthans (2002), emotional intelligence applied to work is useful for creating a network of relationships that can be used in times of difficulty.

Salanova (2008), following the path marked by Luthans, noted that the rapid changes in societies also determine a rapid change in organisations. Organisational changes, in turn, result in changes in the workplace that can positively or negatively influence the health, safety, and well-being of employees. So, if these changes are not well managed, this can eventually lead to the emergence of "sick" organisations that are characterised by their inability to adapt to the environment.

The author also points out that modern organisations expect their employees to be proactive and show personal initiative, to collaborate with others, to be responsible for their own career development and to commit to "business excellence". "This business objective cannot be achieved with a "healthy" workforce in the traditional style: employees satisfied with their jobs, who do not experience job stress and who have low rates of absenteeism. It takes more than this to move all the organisational machinery and achieve this goal... The concept of the healthy organisation fits perfectly into this more positive scientific perspective."

However, Luthans and Youssef (June, 2007) emphasise that people with positive attitudes do not necessarily create positive teams, since collective cognitions, emotions and actions are legitimated, promoted and coordinated by factors (business values, rules, policies and practices) that must exist in the organisational context in which they are expressed. For example, the honesty of the organisation can facilitate, enable and even generate individual honesty. Therefore, if the facilitating factors promoted by the organisation do not exist, individual positive actions are of little use.

POSITIVE ORGANISATIONAL BEHAVIOUR AND WORK PERFORMANCE

The meta-analytic research by Luthans and Youssef (June 2007) has shown that positive organisational behaviour can contribute between 4% and 15% of the variation in work performance. In addition, the authors calculated the economic impact of the results in the two companies where the research was conducted, concluding that the usefulness of individual positive psychology (optimism = 0.028 and persistence/tenacity = 0.055) multiplied by the average salary of an employee ($ 50,000) and multiplied by the number of workers (almost 25,000) results in an increase of $ 50,000,000 in the companies' profits. Finally, the authors note that "the positive behaviours of workers, together with the positive behaviours of organisations, have a positive and substantial impact on both individual and organisational performance as well as on other business results. These results are probably more important than the results that can be achieved using other material resources, or other economic models."

Other empirical studies support these findings. In

particular, the investigations of Wright and Cropanzano (2004), which show that Happiness/Psychological Well-being (PWB), a very similar concept to that of positive organisational behaviour, explained up to 25% of the variation in the results of workers. Specifically, the authors note that the higher the level of happiness and positive emotions of workers, the stronger the link between job satisfaction, performance and results. These authors, making a calculation similar to the one described above, note that in a company of 10 engineers with an average salary of $ 65,000, the annual profit of Happiness / Psychological Well-being (PWB) is $ 650,000.

Other researchers, Judge and Erez (2007) suggest that a correct application to performance of the combination of Emotional stability and Extraversion –which, in turn, is a reflection of a happy personality– involves much more significant results than isolated behaviours. Their results clearly indicate that people who are optimistic, cheerful and enthusiastic in life, achieve better performance than sad people.

CONCLUSIONS

In this review, we have presented the enormous contributions of positive psychology to the subject of happiness and its influences on the organisation and productivity.

As a potential contribution, a review has been provided of the various authors who have addressed the issue of positive psychology and happiness. The differences between them have been highlighted, especially considering that there is no unanimity between them regarding the fundamentals. While some opt for a concept of happiness that is equated with pleasure, others prefer a mixture of pleasure, engagement and meaning, however they avoid defining happiness or, rather, hide it behind the word well-being (which represents a more manageable concept from a psychological perspective). We would like to conclude this review showing that positive psychology should focus on ways of achieving happiness, as it can be presented as the necessary bridge in order to put aside the philosophical search for the sovereign principle of happiness and focus on the guidelines that lead to happiness, which, after all, are not incompatible with each other and can be pursued simultaneously in order to seek and achieve happiness.

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THE EFFECTIVENESS OF MUSIC THERAPY IN AUTISM SPECTRUM DISORDER: A LITERATURE REVIEW

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Este trabajo incluye una revisión de la literatura existente sobre intervenciones en musicoterapia en personas con Trastorno de Espectro Autista (TEA) con el objetivo de analizar el grado de efectividad de estas intervenciones. Para llevar a cabo esta revisión, se realizó una búsqueda bibliográfica en las bases de datos pertinentes, y considerando los criterios de inclusión delimitados se incluyeron un total de 18 estudios, cuyos resultados han sido analizados. En 11 de las 18 intervenciones se obtienen mejoras estadísticamente significativas, mientras que en las 7 intervenciones restantes, o bien la mejoría no alcanza la significación estadística, o bien existe algún tipo de limitación en cuanto a la efectividad de la intervención en evaluaciones de seguimiento. Considerando estos resultados se concluye que la musicoterapia puede llegar a convertirse en una práctica prometedora para mejorar la comunicación e interacción social de las personas con TEA. Sin embargo, todavía es necesario un mayor volumen de investigación para aclarar qué tipo de intervenciones y en qué ámbitos del espectro autista en concreto son realmente eficaces estas intervenciones.
Palabras clave: *Autismo, Intervención, Musicoterapia, Revisión bibliográfica, TEA.*

This work includes a review of the literature on music therapy interventions with people with Autism Spectrum Disorder (ASD) in order to analyse the degree of effectiveness of these interventions. To conduct this review, a literature search of the relevant databases was performed and, with the inclusion criteria defined, a total of 18 studies were analysed. In 11 of the 18 interventions, statistically significant improvements were obtained, while in the remaining 7 interventions, the improvement did not reach statistical significance, or there was a limitation to the intervention effectiveness in follow-up evaluations. Considering these results, we conclude that music therapy may become a promising practice for improving the communication and social interaction of people with ASD. However, a greater volume of research is still needed to clarify the type of interventions and the areas of the autism spectrum disorder in which these interventions are actually effective.
Key words: *ASD, Autism, Intervention, Literature review, Music therapy.*

The latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5, APA, 2013), conceptualises autistic spectrum disorder (ASD) as a neurodevelopmental disorder characterised by persistent deficits in communication and social interaction and the possible presence of restricted and repetitive patterns of behaviour, interests or activities.

Different types of interventions have been used in the treatment of ASD. One of these intervention strategies explored in recent years to improve the characteristic deficits of people with ASD with regards to communication and social interaction is music therapy, which uses music for therapeutic purposes. This technique allows us to open communication channels, to facilitate the socialisation of these individuals and improve their quality of life.

According to the World Federation of Music Therapy (WFMT), this technique uses music and its elements professionally as an intervention in medical, educational and everyday environments with individuals, groups, families or communities seeking to optimise their quality of life and improve their physical, social, communicative, emotional, and intellectual well-being, in addition to their spiritual health (WFMT, 2011).

The American Music Therapy Association (AMTA), more specifically, defines music therapy as the clinical and evidence-based use of musical interventions to achieve individualised goals within a therapeutic relationship by a credentialed professional. This association indicates that it is an established healthcare profession, in which music is used within a therapeutic relationship to address the physical, emotional, cognitive and social needs of individuals. In the same vein, Professor Benenzon (2000) describes music therapy as a type of psychotherapy that uses sound, music, and body-sound-music instruments to establish a relationship between the music therapist and the patient, through which the quality of life is improved

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and the patient recovers and is rehabilitated into society (p.25).

As for the therapeutic effects, as well as improving quality of life at the individual level, Benenzon (2000) points out the possibility that with the use of music therapy it is also possible to improve the family environment. The author claims that the family environment of a child with autism has a disturbed communication system with this child, since its code, signals and messages are distorted and stereotypes are formed, which the author called "communication cysts". According to Benenzon (2000), working in a non-verbal context (with music therapy techniques), the family is able to deconstruct this system and restructure the "communication cysts".

Recent research, such as the meta-analysis by Whipple (2004), in which the results of 9 quantitative studies evaluating the effects of music therapy in people with ASD are synthesised, has shown that this can be considered an effective treatment in developing communication, interpersonal and personal responsibility, and playing skills. In the same vein, Gold, Wigram and Elefant (2006), who reviewed the effectiveness of music therapy in a total of 24 children with ASD between 2 and 9 years old, showed that music therapy has positive effects on the non-verbal communication, gestural communication and verbal communication of these children. Positive results have also been reported with adult population in terms of communication, social skills and behavioural changes (Accordino, Comer & Heller, 2007).

Recent revisions, such as the one by Geretsegger, Elefant, Mössler and Gold (2014) which includes 10 studies with a total of 165 participants with ASD, have reported satisfactory results, as the results indicate that music therapy not only improves social interaction, nonverbal and verbal skills, social and emotional reciprocity, but also the quality of relations between parents and children. The review by James et al. (2015), which includes 12 published studies with a total of 147 participants with ASD between the ages of 3 and 38, also found that after an intervention based on music therapy a decrease in undesirable behaviour occurred, social interaction was promoted, and there was an improvement in independent functioning, understanding emotions, and communication.

All the aforementioned studies suggest that music-therapy is a promising practice for improving the quality of life of people with ASD. However, it is worth considering that empirical studies on this topic are still scarce, hence the importance of continuing to carry out research into the effectiveness of this promising intervention.

The main objective of this study is to analyse the degree of effectiveness of music therapy interventions in people with ASD. For this, a review has been carried out of the empirical studies published in the last fifteen years.

We believe that this review is an extension of the conclusions of the reviews carried out in recent studies of the same nature (Geretsegger et al, 2014; James et al, 2015), in that it extends the article search to the year 2015 (the previous reviews extended until 2012), and complemented the database search with manual searches in different specialised music therapy journals that were not used in the previous reviews. As a result, this review has included a significantly higher number of studies than the previous reviews (18 investigations compared with the 10 reviewed by Geretsegger et al., 2014 and the 12 analysed by James et al., 2015).

METHOD

The following databases were used in performing the literature search: PsycINFO, ERIC and Google Scholar using the keywords: "music therapy", "intervention", "autism". To narrow the search and obtain a reasonable number of results, we restricted the search using filters and Boolean operators (Y/AND, O/OR and NO/NOT). In addition to the databases, a manual search was conducted in the following publications: *Journal of Music Therapy, Nordic Journal of Music Therapy, Music Therapy Perspectives, Autism.*

The articles included in this review were selected taking into account the following inclusion criteria:

- ✔ Search limited to the period between 2000 and 2015.
- ✔ Empirical articles published in Spanish or English.
- ✔ The inclusion of samples with ASD diagnoses.

Of all of the articles located, we eliminated the following:

- ✔ Articles that were not empirical studies.
- ✔ Ones where the intervention used did not have music as a central element.
- ✔ Studies that had participants with no ASD diagnosis or the diagnosis was not specified.

After performing the literature search described, 18 articles were selected. The total number of participants with ASD in this theoretical review is 274, of which 233 are males and 41 are females; all aged between 2-49 years old.

RESULTS

All of the information from the 18 selected items is included in Table 1. This table includes the authors of the study and year of publication, objectives, participant characteristics (age, sex, diagnosis), assessment tools, intervention/method, context, implementer and results.

The literature shows that many of the affected areas in children with ASD can be enhanced with music therapy interventions. It can be seen that each of the studies is focused on improving or evaluating different areas. Out of the 18 studies included in this review, three of them are focused on improving the behavioural profile and autistic behaviours (Boso et al., 2007; Brownell, 2002; Mateos-Moreno & Atencia-Doña, 2013), two on improving emotional understanding and engagement (Katagiri, 2009; Kim et al, 2009), four are focused on improving or increasing social skills (Finnigan & Starr, 2010; Kim et al, 2008; Pasiali, 2004; Schwartzberg & Silverman, 2013), two of them aim to improve independent functioning (Kern et al, 2007a; Kern et al, 2007b), five are focused on improving communication skills (Farmer, 2003; Gattino et al, 2011; Kaplan & Steele, 2005; Lim, 2010; Lim & Draper, 2011), one on improving peer interactions (Kern & Aldridge, 2006), and another on examining the effects of group music therapy intervention on eye gaze, joint attention and communication (LaGasse, 2014).

As for the type of intervention used, out of the 18 studies, three were based solely on singing original or modified songs (Kern et al, 2007a; Kern et al, 2007b; Lim & Draper, 2011), one used composed songs recorded on video, which the participants watched during the intervention (Lim, 2010), another used composed songs and recordings as background music (Katagiri, 2009), another seven were based on singing, either original songs or modified/adapted songs and playing musical instruments (Boso et al., 2007; Farmer, 2003; Finnigan &

TABLE 1
ITEMS INCLUDED IN THE REVIEW

Authors (year)	Objectives	N (age, sex, diagnosis)	Instruments	Intervention/Context and implementer	Design	Results
Boso, Emanuele, Minazzi, Abbamonte & Politi (2007)	To investigate whether music therapy could improve the behavioural profile and musical skills of young people affected by severe autism.	8 (7 males and 1 female) from the ages of 23 to 38 with ASD. No participant had previous experience of music therapy.	✔ Clinical Global Impression (CGI). ✔ Brief Psychiatric Rating Scale (BPRS). ✔ Musical ability (Likert scale made by authors).	52 sessions, one per week of 1 hour each. Three musical activities: percussion, singing and piano. Music therapist.	One experimental group alone participated. Comparison of pre and post measures.	Significant improvement in autistic symptoms and musical ability during the first 6 months of the intervention. No further improvement in the final 6 months of the intervention (except in complex rhythms).
Brownell (2002)	To investigate the effect of a musical presentation of information of a social story on the behaviour of students with autism.	4 children aged 6 to 9 years. They have previously expressed positive reactions to musical education.	✔ Behavioural observation record (the target behaviour to observe is different for each child, depending on their characteristics)	3 conditions: Baseline, reading social stories and singing social stories. School (separate from ordinary classroom). Researcher.	Design of multiple treatments. Study of 4 cases. Comparison of measures in each treatment	For all 4 children, the target behaviour was reduced more in the conditions of reading and singing social stories. For all 4 children the reduction was greater in the condition "singing" than in the condition "reading", but this reduction was only statistically significant for one child.
Farmer (2003)	To determine whether music with gestures could increase verbal and nonverbal communication in children with autism.	10 (9 boys and 1 girl) from 2 to 5 years old with autism.	✔ Observation form (the verbal and nonverbal responses of the participants were observed).	5 sessions (20 min. each). Movement and imitation activities. Participants' homes and therapy centres. Therapist.	Randomised groups: 5 subjects were randomly placed in the experimental group and 5 in the control group. Repeated measures analysis.	Substantial increase of verbal responses for the music group. Gestural responses did not increase but the music group scored consistently higher scores than the non-music group.
Finnigan & Starr (2010)	To determine the effects of musical and non-musical interventions in sensitive and avoidance social behaviours of a child with autism.	1 girl, aged 3 years and 8 months. She had no previous exposure to music therapy sessions.	✔ Mullen Scales of Early Learning. ✔ Vineland Adaptive Behaviour Scales – Second Edition. ✔ Childhood Autism Rating Scale ✔ Autism Diagnostic Observation Schedule.	29 sessions. 4 times a week for 15 minutes. Sessions with music and without music were alternated. School and home. Music therapist.	Alternating treatment design. Single case study. Comparison of measures in each treatment.	The music condition was effective both in raising sensitive social behaviours and decreasing avoidance behaviours, but this result was not maintained during the follow-up phase.

TABLE 1
ITEMS INCLUDED IN THE REVIEW (Continued)

Authors (year)	Objectives	N (age, sex, diagnosis)	Instruments	Intervention/Context and implementer	Design	Results
Gattino, Riesgo, Longo, Leite & Faccini (2011)	To investigate the effects of relational music therapy (RMT) on the verbal, nonverbal and social communication of children with ASD.	24 boys from 7 to 12 years: 10 with Autistic Disorder, 12 with pervasive developmental disorder-not otherwise specified and 2 with Asperger syndrome. They had no previous experience of music therapy.	✔ Brazilianversion of the CARS ✔ Brazilian version of ADI-R. ✔ Test Raven Color	Experimental group music therapy interventions and control group routine activities. 16 sessions of 30 min. 7 months. Hospital of Porto Alegre (Brazil). Music therapist.	Randomised groups. Comparison of pre and post measures.	There were no statistically significant improvements. A statistically significant difference was found however in the subgroup analysis of non-verbal communication among patients with ASD.
Kaplan & Steele (2005)	To analyse the goals of the music therapy program and the results for people with ASD, focused on improving communication and language, and promoting social and behavioural skills.	40 children and adults (28 males and 12 females), from the ages of 2 to 49 with ASD.	✔ Measurement program to collect and organise data. ✔ Questionnaires for parents/caregivers. ✔ Observation record (initial and intermediate objectives).	Five areas: behavioural/psychosocial; language/communication; perceptual/motor; cognitive; and musical. Music school and home. Music therapist.	Groups according to type of treatment received. Comparison analysis of treatments.	All achieved the initial objectives in one year. The parents and caregivers surveyed indicated generalisation of the skills acquired in music therapy to non-music therapy environments.
Katagiri (2009)	To examine the effect of background music and songs texts to teach emotional understanding to children with autism.	12 students with ASD between the ages of 9 and 15.	✔ Japanese and Caucasian Facial Expressions of Emotion (JACFEE). ✔ Teaching Children with Autism to Mind-Read. ✔ Camera to capture facial expressions. ✔ Form for recording specific emotions: happiness, sadness, anger and fear.	4 conditions: not teaching emotion; teaching verbal emotion; teaching verbal emotion with background music; and teaching emotion singing. 8 sessions of 30 min. School and home of the participants. Researcher.	Comparison of pre and post measures after 8 sessions of individual treatment with 4 conditions to analyse their effectiveness.	All participants improved significantly in their understanding of the four selected emotions. All conditions of the intervention resulted in significant improvements in the emotional understanding of the participants, although the background music led to the greatest improvements.
Kern & Aldridge (2006)	Improving peer interaction and meaningful play of children with autism through music therapy interventions.	4 boys aged 3 to 5 years with autism. Participants had to have an interest in and a positive response to music.	✔ Childhood Autism Rating Scale (CARS). ✔ Recorded observation of behaviours and peer interactions.	Each observation lasted 10 min daily for 8 months. 4 conditions: baseline, playground adaptation, teacher-mediated intervention and peer-mediated intervention. School playground. Teachers and therapists.	Multiple baseline design with four conditions carried out with each child.	The results indicate an increase in peer interactions in the phase of teacher-mediated and peer-mediated intervention, compared with the initial baseline and the patio adaptation phase. Playing and handling of material and equipment increased significantly in the last two conditions.
Kern, Wakeford & Aldridge (2007a)	To improve the performance of a child with autism during personal care tasks through song interventions.	One boy aged 3 years and 2 months with ASD.	✔ Psychoeducational Profile- Revised (PEP-R). ✔ Autism Diagnostic Observation Schedule (ADOS). ✔ Vineland Adaptive Behavior Scales. ✔ Childhood Autism Rating Scale (CARS). ✔ Clinical observation. ✔ Interviews with parents.	3 tasks to improve: hand washing, toileting and cleanliness. Two conditions: intervention composed songs and lyrical intervention using words. School of the participant. Teacher and music therapist.	Alternating treatment design. Single case study. Comparison of measures in each treatment.	Both the song and lyrical interventions were beneficial for all selected tasks; but the frequency, intensity, complexity and novelty of the tasks produced differences in the specific results between the three tasks. The results did not show that any one condition was much more effective than the others.

TABLE 1
ITEMS INCLUDED IN THE REVIEW (Continued)

Authors (year)	Objectives	N (age, sex, diagnosis)	Instruments	Intervention/Context and implementer	Design	Results
Kern, Wolery & Aldridge (2007b)	To assess the effects of incorporating a music therapy intervention on the independent functioning of children with autism during routine arrival / morning greeting.	2 children with autism (P1 aged 3 years and 5 months; P2 aged 3 years and 2 months).	✔ Childhood Autism Rating Scale (CARS). ✔ Behaviour observation record (help by the teacher, problem behaviours).	Study carried out during routine morning greeting. For P1 an ABAB design and for P2 an ABCAC design was used, where A is the baseline, B involved the use of the song during the routine, and C was a modification of the song. School. Music therapist and teachers.	Study of the effectiveness of the intervention in two cases.	P1's performance in the routine morning greeting increased. In the second baseline the frequency decreased, and again increased with the reintroduction of the intervention. For P2 the initial application of the intervention did not show an increase in performance. The application of modified intervention did show an increase in performance, while the second baseline showed a decrease.
Kim, Wigram & Gold (2008)	To investigate the effects of music therapy improvisation on joint attention behaviours in children with autism.	15 (13 boys and 2 girls) aged between 3 and 5 years with autism. They had no previous experience in music therapy.	✔ Korean version of CARS. ✔ The Autism Diagnostic Observation Schedule (ADOS). ✔ Korean version of Psychoeducational Profile (PEP). ✔ Pervasive Developmental Disorder Behavior Inventory-C (PDDBI). ✔ Early Social Communication Scales (ESCS). ✔ Observation of the target behaviours.	12 sessions of 30 min. music therapy, and 12 sessions of 30 mins play therapy. Between 7 and 8 months program of 24 sessions. Department of child and adolescent psychiatry at Seoul National University Hospital (SNUH). Two music therapists, one play therapist and three graduate students in music therapy.	A randomised controlled study design using a single comparison design in two different conditions, music therapy sessions and improvisation games with toys.	The improvisation music therapy was more effective than the play therapy in facilitating the behaviours of joint attention and nonverbal social communication skills. Eye contact duration was significantly longer in music therapy than in play therapy. As for turn-taking, music therapy was more effective. There was a longer duration of turn-taking activity in the part directed by the therapist.
Kim, Wigram & Gold (2009)	To investigate the effects of music therapy improvisation by measuring the ability of emotional, motivational and interpersonal response in children with autism.	15 (13 boys and 2 girls) aged 3 to 5 years with autism. They had no previous experience of music therapy	✔ Korean version of CARS. ✔ Korean version of the Psycho Educational Profile (PEP). ✔ Korean version of the Vineland Social Maturity Scale (SMS). ✔ The Autism Diagnostic Observation Schedule (ADOS). ✔ Record sheet for behaviours.	12 sessions of 30 mins of music therapy, and 12 sessions of 30 mins of play therapy. Each session was divided into two: one part undirected and the other part directed. Department of Child and Adolescent Psychiatry at Seoul National University Hospital (SNUH). Play therapist and music therapist, and social worker.	Randomised controlled study using a single design comparison in two different conditions: improvisational music therapy and play sessions.	Significantly more frequent and longer lasting results in music therapy than in play therapy. The social aspects of behaviour constantly and more improved in the condition of music therapy. Compliance with the responses had noticeably more presence in music therapy than in play therapy.
LaGasse (2014)	To examine the effects of a music therapy group intervention on eye gaze, joint attention, and communication in children with autism.	17 (13 boys and 4 girls) aged from 6 to 9 years with ASD diagnosis. Average age: 7.58 years.	✔ Childhood Autism Rating Scale - second edition (CARS2). ✔ Social Responsiveness Scale (SRS).Autism Treatment Evaluation Checklist (ATEC). ✔ Observation of behaviour (eye gaze, joint attention, communication, withdrawal/behaviours).	Music Therapy Group (MTG; N = 9) and group social skills (5.5G; N = 8). 10 sessions of 50 min. Each session: welcome exercise, sensory and social experiences, interaction (with or without music), cooperative play and closing exercise. Music therapist and educator.	Randomised groups. Comparison of measures between groups.	There were significant differences between the groups for joint attention with peers and eye gaze looking at people, MTG participants showing higher results. There were no significant differences between the groups for initiation of communication, the response to the communication, or withdrawal / behaviours.

TABLE 1
ITEMS INCLUDED IN THE REVIEW (Continued)

Authors (year)	Objectives	N (age, sex, diagnosis)	Instruments	Intervention/Context and implementer	Design	Results
Lim (2010)	To examine the effect of speech training and language development through music in speech production in children with ASD.	50 children with ASD (44 boys and 6 girls) from 3 to 5 years.	✔ Childhood Autism Rating Scale (CARS). ✔ Autism Diagnostic Interview Revised (ADI-R). ✔ Preschool Language Scale. ✔ Peabody. ✔ Receptive and Expressive One Word Picture Vocabulary Test. ✔ Developmental Speech and Language Training through Music (DSLM). ✔ Verbal Production Evaluation Scale (VPES). Evaluates: semantics, phonology, pragmatics and prosody.	3 conditions: musical training (N = 18), speech training (N = 18) and a control group with no intervention (N = 14). Each group watched a video, of either music or speech, twice daily for 3 days. Schools or the participants and therapy centres. Researcher.	Randomised groups. Comparison of pre and post training measures.	Both music and speech training are effective in improving speech production. The participants who received musical training made greater progress than the participants who received speech training; however, the difference was not statistically significant. High-functioning children present more expressive and active communication during musical training.
Lim & Draper (2011)	To compare a common form of ABA VB approach without music with the same approach with music incorporated on the speech production of children with autism.	22 children (17 boys and 5 girls) aged 3 to 5 years with autism.	✔ Verbal Production Evaluation Scale (VPES).	3 conditions: musical training, speech training and no training; and 4 verbal operant conditions: mand, tact, echoic and intraverbal. ABA VB training method. They received both trainings 3 days a week for 2 weeks. Music therapist and researcher.	Randomised groups. Comparison of measures between groups / conditions.	The score on the VPES for musical training target words was higher than the score in the VPES for the speech training target words; however, the difference was not significant. The music and speech training had a significant effect on verbal operant production compared to the condition of no training.
Mateos-Moreno & Atencia-Doña (2013)	To examine the effect of combining dance / movement and music therapy in young adults diagnosed with severe autism.	16 (15 men and 1 woman) with severe autism. Average age: 25 years. They had no previous experience in music or dance.	✔ Childhood Autism Rating Scale. ✔ Revised Clinical Scale for the Evaluation of Autistic Behavior (ECA-R).	Experimental group (N = 8) and control group (N = 8). 36 sessions combining music therapy and dance / movement with one hour duration, for 17 weeks. Specialised care centre. Music therapist and dance therapist, and three assistants.	Randomised groups. Comparison of pre and post training measures.	Both the experimental and the control group had a positive development. Statistically significant differences at the post-test level were found for the interaction disorder, and for the functions of imitation, emotion, instinct and behaviour regulation without variability.
Pasiali (2004)	To investigate the effect of prescriptive therapeutic songs to promote the acquisition of social skills of children with autism.	2 boys: P1, 7 years old, and P2, 9 years old; and 1 girl of 8 years of age (P3). All with ASD. No participant had previous experience in music therapy.	✔ Behaviour registration form (child's name, identified target behaviour, definition of behaviour, when the behaviour occurs, how often).	An ABAB design, where A is the baseline, and B is the intervention used. Protocol of prescriptive therapeutic song, adapting some favourite songs of the child. Each 15 min session consists of three applications of music therapy: listening, playing rhythmical instruments and singing. Isolated room in the home of each participant. Researcher.	Study of effectiveness of the intervention in two cases.	The application of the intervention protocol of prescriptive song succeeded in reducing the behaviour objective of each participant during the early stages of intervention. For P1, the change was significant. For P2, both the comparison of the scores of the two basic conditions with the scores of the two intervention conditions, and the comparison between the first baseline and the first intervention conditions were significant. For P3 none of the comparisons was significant.

TABLE 1
ITEMS INCLUDED IN THE REVIEW (Continued)

Authors (year)	Objectives	N (age, sex, diagnosis)	Instruments	Intervention/Context and implementer	Design	Results
Schwartzberg & Silverman (2013)	To examine the effects of social stories based on music on the understanding and generalisation of social skills in children with autism spectrum disorders.	30 (29 men and one woman) from 9 to 21 years with autism	✔ Autism Social Skills Profile (ASSP). 3 subcategories: social reciprocity (SR), social participation (SP) and detrimental social behaviors behaviours (DSB) ✔ Comprehension checking questions (CC) to determine levels of understanding of participants for each social story	3 not musical control groups (reading social stories) and 3 experimental groups of music therapy (social stories told). 3 consecutive sessions of 50 mins for each group. Summer Camp. Music therapy.	Randomised groups.Comparison of pre and post training measures.	The only main effect for the ASSP that was significant was subcategory (SR versus SP versus DSB). The main effects of time (pre-test versus post-test) in the CC were significant, the scores being higher in the post-test. The participants showed mixed results. Camp staff supports the use of social stories with music as a means for learning social skills.

Starr, 2010; Kaplan & Steele, 2005; Kern & Aldridge, 2006; LaGasse, 2014; Pasiali, 2004); additionally, one study also included dance (Mateos-Moreno & Atencia-Doña, 2013), two were based on the singing of social stories (Brownell, 2002; Schwartzberg & Silverman, 2013), two other studies focus on improvisation (Kim, et al, 2008; Kim, et al, 2009), which divided the sessions into two halves, one led by the children and another led by the therapist, and another study was based on relational music therapy (Gattino et al., 2011), which takes place through experiences such as singing, composing, improvising and playing musical games.

The duration of the interventions varied from less than 10 sessions to a total of between 50 and 60 sessions. In some studies, the number of sessions was not specified, but instead the study duration was indicated, ranging from a duration of 4 weeks to 2 years. As for the context of the intervention, the sessions were held in hospitals or therapy centres, at school, at home or even in a summer camp. With regards to the people who implement the intervention, these included both specialists, either music therapists or therapists specialising in play and dance, and generalist teachers and researchers.

Finally, with regards to the results, in 11 of the 18 studies significant improvements were obtained with the intervention condition in music therapy, compared to the control group or the base line (Farmer, 2003; Finnigan & Starr, 2010; Kaplan & Steele, 2005; Katagiri, 2009; Kern & Aldridge, 2006; Kern et al, 2007b; Kim et al, 2008; Kim et al, 2009; Lim, 2010; Lim & Draper, 2011; Mateos-Moreno & Atencia-Doña, 2013).

In the remaining 7 studies, improvements were obtained that did not reach statistical significance (Gattino et al, 2011; Kern et al, 2007a; LaGasse, 2014; Schwartzberg & Silverman, 2013), or improvements occurred that were not maintained throughout the procedure (Boso et al., 2007; Pasiali, 2004) or ones that occurred only in some participants, but not in all of them (Brownell, 2002).

DISCUSSION

The number of published papers that met the search criteria discussed in the method was low, only 18 articles in a period of 15 years. This may be because it is not common for the studies and interventions in this area to be carried out as experimental works that include comparison groups and pre test-post test type designs, so during the literature search for the review many studies were discarded that did not offer sufficient factual information on the effects of the interventions described.

Furthermore, only 11 of the 18 studies reviewed showed a proven improvement in the aspects evaluated in the study participants, while the remaining 7 studies reviewed obtained results in which the improvements did not reach the statistical significance required to confirm with adequate certainty that they produce improvements in subjects with ASD.

The obtaining of mixed and seemingly contradictory results in the different studies reviewed is somewhat reasonable, if we consider two fundamental aspects:

Firstly, the heterogeneity of the characteristics of the participants of the various investigations, a heterogeneity in accordance with the breadth of symptoms that are collected within the autistic spectrum; and, secondly, the great diversity in the interventions grouped under the label of music therapy. As demonstrated in this review, the interventions that were carried out in the different research studies had a different duration, were implemented by different professionals and address

different aspects of interventions related to music (listening, singing, practicals with instruments, improvisations, combining with social stories, etc.).

The combination of these two factors contributes to the fact that the results are not clear or easily replicated by the different investigations, because in all probability some types of interventions may be appropriate for some individuals with ASD, but not for other subjects with the same diagnosis but a different level of severity and associated characteristics. This is evident in some of the interventions covered in this review, in which multiple case studies show how the same intervention has different effects on different participants (Brownell, 2002; Kern et al, 2007b; Pasiali, 2004).

Therefore, although the results of some of the studies are promising, it is still necessary to continue accumulating evidence that allows us to find out exactly which type of interventions are appropriate to improve which specific aspects within the autism spectrum.

Music is a very powerful element of communication that can facilitate and promote communication and social interaction in people with ASD –areas in which these people usually have serious difficulties. In addition, music is a source of pleasure, so it can produce relaxing effects and contribute to reducing behaviour problems. It can also be an interesting strategy for regulating excess energy and controlling anger or other negative emotions, so we must continue in this area of research to try to find out in which cases interventions based on music therapy should be added to the other interventions that are usually carried out with people with ASD (social skills training, establishing routines, communication strategies, etc.) in order to achieve comprehensive interventions.

However, interventions based on music therapy face many challenges. One of them concerns which professional should carry out these interventions. It is possible that the effectiveness of the interventions does not depend only on the intervention itself, but also on the training of the professional, which can positively (or negatively) affect the results for reasons outside the intervention itself, which would have significant repercussions in the training of professionals who work directly with people with ASD in the different contexts (educational, clinical, etc.).

A number of limitations have been found in this review, such as the low number of experimental studies found; the low number of participants in some studies, which means that in some cases the findings are not generalisable to other children with ASD; or the short duration of some of the interventions reviewed, which has perhaps not enabled us to assess with sufficient accuracy the effectiveness of these shorter interventions. Moreover, unpublished studies have not been included in the review, so the conclusions of the review may be affected by publication bias. Finally, in the vast majority of the studies reviewed the degree of severity of the ASD of the participants was not specified, an aspect of considerable importance, given the heterogeneity of the characteristics that are grouped under the label ASD.

Due to all the limitations discussed above, several proposals are made for future investigations. First, it has become clear that it is necessary to develop a greater volume of empirical studies in which objective indicators (quantitative or qualitative) are offered of the effectiveness of interventions in music therapy. These studies should have sufficiently large samples to allow the extrapolation of the results to the population of subjects with ASD, and special attention should be paid to the description of these subjects, in order to allow other researchers to replicate and compare the results of the different studies. The duration of the intervention should also be extended, and follow-ups should be carried out after the interventions to ensure that the positive effect was consolidated over time. In addition, comparisons could be made between different types of music therapy, and also music therapy should continue to be researched in comparison with other interventions. Finally, it would be very interesting to explore the relationship of possible alterations in the sensory profile of children with ASD with the effects of music therapy, because the sensory profile of these children is a characteristic that is being given more weight in the diagnosis of ASD.

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