



Statement validity assessment: myths and limitations

Günter Köhnken^a, Antonio L. Manzanero^b y M. Teresa Scott^{c,*}^a University of Kiel, Germany^b Complutense University of Madrid, Spain^c Universidad del Desarrollo, Chile

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Abstract

This paper examines the applicability and limitations of one of the procedures most commonly used to analyze the credibility of a testimony, the Statement Validity Assessment (SVA). The starting point for a successful implementation is a thorough consideration of the possible sources that could lead to a statement, following the method of falsifiability of hypotheses. Major errors of use are described and the methods for different scenarios to be analyzed are clarified, considering both the relevance of each procedure and its limitations. In conclusion, the dangers of an incorrect or incomplete implementation of SVA, regardless of the hypotheses and the recommended valuation technique, are pointed out, as long as the risk of overgeneralizing the use of content analysis (CBCA).

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Análisis de la validez de las declaraciones: mitos y limitaciones

Resumen

El presente trabajo analiza la aplicabilidad y limitaciones de uno de los procedimientos más empleado para analizar la credibilidad de un testimonio, el SVA. El punto de partida para su correcta aplicación es una consideración exhaustiva de las posibles fuentes que pudieran dar origen a una declaración siguiendo el método de falsación de hipótesis. Se describen los principales errores en su utilización y se clarifican los métodos indicados para las diferentes hipótesis a ser analizadas, contemplando tanto la pertinencia de cada procedimiento como sus limitaciones. Se concluye acerca de los peligros de una incorrecta o incompleta aplicación del SVA al margen del planteamiento de hipótesis y la técnica recomendada para su valoración, como a su vez el riesgo de sobregeneralizar el uso de los análisis de contenido (CBCA).

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A large number of proposals to assess the statements' credibility of possible victims of sexual abuse appeared during the 1970s and 1980s. For further review of these procedures in Spanish, (see Garrido & Masip, 2001; Manzanero, 1996, 2001, 2010; Masip & Garrido, 2007). Among these proposals, SVA is perhaps the most-known (Statement Validity Assessment; Köhnken & Steller, 1988; Steller & Köhnken, 1989), used in Spanish for the first time in 1990, (S^o 1/90 Jdo. n^o 2 de Aranjuez; S^o 128/91 de la Secc. 17 de la Audiencia Provincial de Madrid; Sentencia 465/91 Jdo. de Instrucción

n^o 1 del Puerto de la Cruz, Tenerife). The Federal Court of Justice of Germany confirmed the use of the SVA as a validity assessment method in 1999 (Federal Court of Justice of Germany, Criminal Court, art. 45, paragraph 164). The origins of SVA can be found in previous proposals from Sweden (Trankell, 1972) and Germany (Arntzen, 1970; Undeutsch, 1967). Forensic psychology has experienced a breakthrough since then, and these techniques assumptions and their limitations are well-known nowadays as well. From a professional point of view, however, it has been observed how the use of these techniques has widely spread over several countries, regardless the empirical data collected in the last three decades.

* Author for contact: Universidad del Desarrollo, Santiago de Chile, Chile.
E-mail: scott.mteresa@gmail.com (M.T. Scott).

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As a result, the fundamentals procedures have been forgotten over time (Köhnken, 2014). A recent study (Pelisoli, Herman, & Dell'Aglio, 2015) about the knowledge that professional and non-professional specialists have about child sexual abuse shows that the percentage of correct answers in a survey about the knowledge of scientific evidence reached 55% for the first group, and 44% for the second one. Among all assessed groups, the North American psychologists obtained the highest percentage of correct answers,

with a score of only 76%. The authors concluded the majority of professionals lack the appropriate knowledge for forensic assessment of child sexual abuse. Thus, it is not uncommon to observe several errors on the assessment of child sexual abuse. SVA is not a psychometric test but a procedure generation and falsifiability of hypothesis regarding the origin of a statement (see Figure 1).

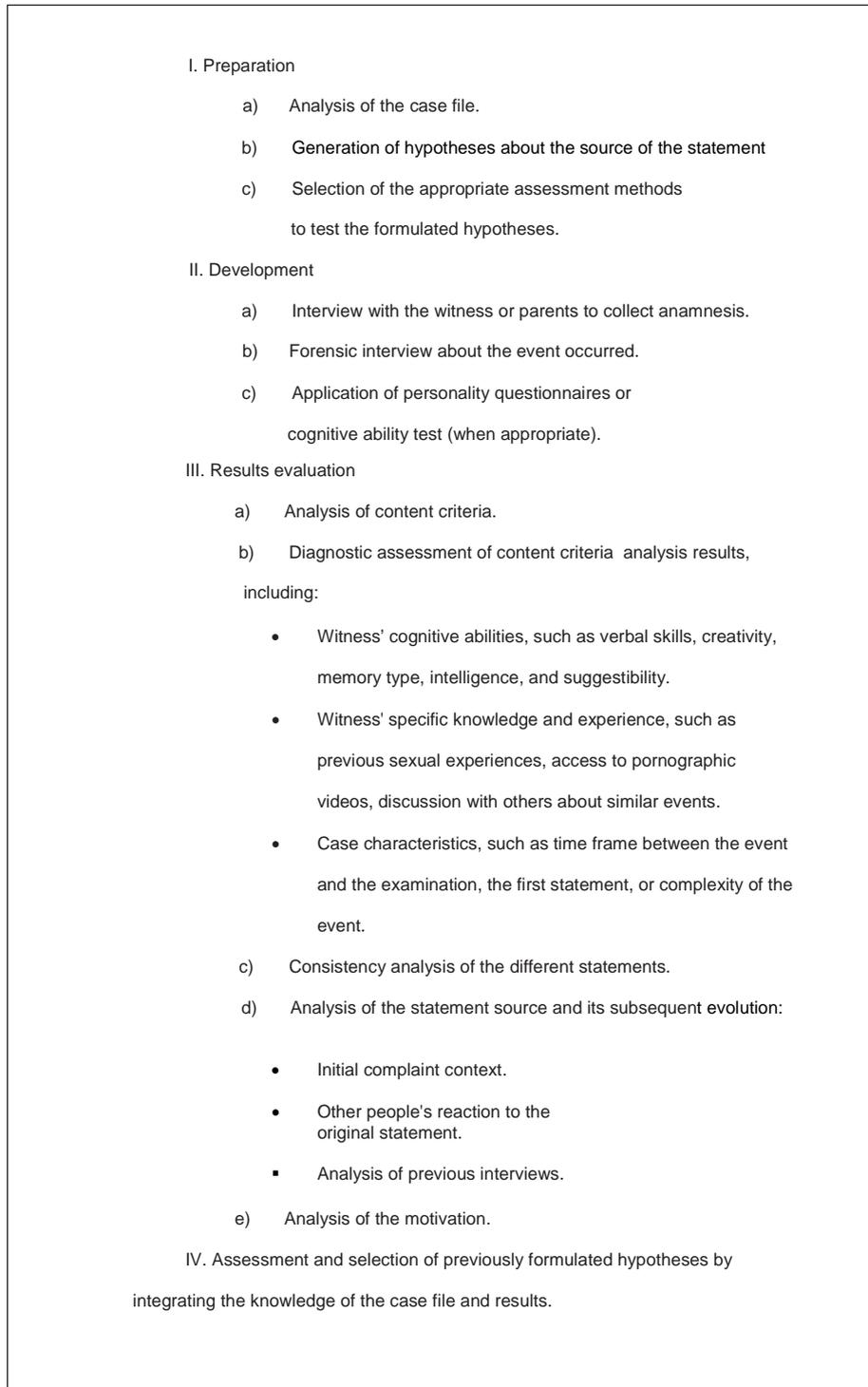


Figure 1. SVA components (Köhnken, 2004).

The application of SVA starts with the assessment of the information contained in the case file (age, cognitive abilities, relation with the defendant); the event in question (type of event, isolated or recurrent episode); previous testimonies, (how many times the witness has been interrogated, what has he/she said, which types of interviews have been used); and any other relevant information (time passed between the event and the complaint, consistency between the statements and other evidence, occurrence of other relevant elements). After gathering these precedents, the appropriate methods of evaluation are planned to test the hypothesis, and therefore, to conduct a semi-structured interview regarding the event in question. Finally, these precedents will be assessed integrating the categories covered in the validity list (the minor's psychological characteristics, characteristics of the interview conducted, motivational aspects regarding the minor's interest in providing a false statement, and issues related with the investigation).

The SVA is not designed to be applied to all scenarios, nor to all subjects or under all circumstances. To understand the SVA's correct application not only requires an academic background, but also and most importantly, to consider the procedure's instructions and limitations.

The aim of this work is to describe errors in the application of SVA, and to clarify the suitable procedures for different hypotheses to be assessed.

Reductionism in the discrimination of statements conception

Statements are often conceived dichotomously, as if their conception were true or false. Consequently, a statement analysis is perceived as a way to detect a lie, and SVA is reduced to an application of the CBCA as a measure to deceit detection, therefore, this reduction often leads to a wrong application of the methods the procedure contains.

Statements can be incorrect for many reasons: an intentional deceit is only one of them. If deliberate deceptions were the only alternative of these errors, then the CBCA would be the correct tool to detect them. However, the source of an incorrect statement has to be previously discriminated in order to evaluate if the application of the CBCA is appropriate or not.

SVA is a comprehensive procedure not only to generate and test hypotheses regarding the possible causes of incorrect statements, but also to detect the source of a particular statement. The procedure includes data gathering methods which are relevant regarding the presented hypotheses, the information analysis techniques, and the precedent information which will serve as a guide for the elaboration of conclusions related with the initial hypotheses.

Therefore, one of the most important and crucial components of the SVA is the hypothesis' thorough approach, that is, the analysis of all the potential sources of a statement or its origins. Everything else—the evaluation process, data to be collected, and the specific evaluation strategies—ultimately depend on the hypothesis formulation. It is imperative that the person performing the evaluation does not have a particular keen on "uncovering" sexual abuse: the evaluator has to be as neutral as possible and open to the possibility that the events discussed may have happened or not. On the contrary, the confirmation bias mistake could be easily made, that is, to tend to positively assess those elements which may confirm the hypothesis itself, then the statements or circumstances which may deny the hypothesis go unnoticed (Tversky & Kahneman, 1974).

Following the falsifiability method (Popper, 1959), all the established hypotheses need to be analyzed, to state in which way these can be falsified or not, based on the given precedents. Raskin and Esplin (1991) suggests five hypotheses which have to be analyzed by the evaluator. The main hypothesis would be that the statement is valid. From this, the alternative hypotheses follow: a) statement is valid, however, the minor has replaced the sexual offender's identity using a different person, b) statement is valid, however, the minor has invented or has been influenced to add additional information which is not valid, c) pressure has been put on the minor by a third party to formulate a false version of the events, d) the minor has presented a false statement in order to help third parties or by personal interests, and e) the minor has invented or fantasized the statement due to psychological issues. Nevertheless, these five hypotheses have been criticized because they have not considered an error as a false statement source. Hence, the possibility that the minor is relating a false event has to be considered too, produced by an interpretation error or a non-intentional memory contamination which will result in a false memory. Raskin and Esplin's proposal is illustrative only, and the hypotheses have to be specifically formulated for the assessed case.

According to the hypothesis falsifiability logic, SVA commonly begins with the following questions: What is the source of this statement? Is the statement a description of the witness's personal experience or has another source? What are the possible reasons for an incorrect statement?

The source of incorrect statements may be different, and the witness' level of conscience about the statement may be different as well. Then, in general terms, this can be due to a) non-intentional errors (lack of competence for testifying, inadvertent errors or false memories) or b) intentional lies. While in false testimonies the subject is aware that he/she is lying, subjects who provide a testimony based on false memories are convinced the event took place, then the subject's false memory equals a true testimony in quality (Bruck & Ceci, 2009; Erdmann, 2001; Loftus, 2005; Volbert & Steller, 2014).

Köhnken (2004) stated two main reasons behind incorrect statements:

a) *Non-intentional errors.*

A statement can be incorrect due to unintentional errors (and perhaps unknowing mistakes). For instance, these may be the result of incomplete perception, lack of attention to the event in question, oblivion, or conflated memory. Opposed to false memories, only some details from a story about a real event are affected by this type of errors.

Methods to evaluate if a particular variable may or may not have resulted into the addition of incorrect details in that particular witness are not available. However, there is a large body of knowledge coming from empirical research about the witnesses' statement accuracy and the variables which may positively or negatively affect a testimony's accuracy (Ceci, Ross, & Toglia, 1989; Hritz et al., 2015; Manzanero, 2010; Toglia, Read, Ross, & Lindsay, 2007). These research results cannot be assessed based on the fact a statement is correct or not. On the contrary, they indicate certain error probability based on the empirical knowledge contributions. Therefore, risk analysis is the appropriate method. The question is: what is the risk that involuntary mistakes are made when a particular variable is present during the encoding, storage, and retrieval processes?

Then, assessing the competences to testify results important when assessing risks: these competences may be limited in small children (Manzanero & Barón, 2014). Usually, children under age four do not have these cognitive

competences required for correct perception, memory storage, recovery, and identification of the information source. It should be taken into account that this is a general rule: children of the same age have different cognitive competences. Further, it is very possible that a young child can correctly describe an event which happened within minutes, while after some time, a useful description in forensic terms may not exist. In addition, it is relevant to differentiate in this point between semantic memory (knowledge coming from diverse sources) and episodic memory (memories embedded spatially and temporally in the victim's biography).

At the same time, it is important to consider that with children around four to six years old it is advisable to evaluate the cognitive competencies through development stages tests, as well as by collecting the child's story via interview with parents or other relevant people (Manzanero & González, 2013). It is necessary to consider all the related documentation if the child has been under medical or psychological treatment.

In case of cognitive limitations associated to intellectual disabilities (Manzanero, Recio, Alemany, & Cendra, 2013), the evaluation of the disability level and its effect in the competencies to testify (Contreras, Silva, & Manzanero, 2015) would be necessary before evaluating the statements content. Nevertheless, this does not mean the subject does not have competencies to testify (Manzanero, Contreras, Recio, Alemany, & Martorell, 2012). Sometimes, not all cognitive capacities are affected in the same manner. Moreover, it is important to assess if the cognitive limitations are associated with a psychopathology (e.g.: child psychosis or ADHD), as well as to consider the consumption of toxic substances before, during or after the alleged events. On the other hand, it may be necessary to adapt the content analysis procedures to these subjects, as researches demonstrate that the content of statements may vary for this population (Manzanero, Alemany, Recio, Vallet, & Aróztegui, 2015).

False memories are another source of incorrect, non-intentional statements. They can be produced by a) a wrong interpretation of an event which does not correspond to sexual abuse behavior, b) inadequate interview formats, in the context of police and judicial inquiry, and c) inadequate treatment techniques. Loftus and Davis (2006) state three types of false memories: a) selective memories or selective failure to remember, b) false memories for things not actually witnessed or experienced, and c) distortion or alteration of memories for things actually witnessed or experienced. On the other hand, there would be two general sources of these memory: a) schematic and inferential processing and b) biased information. A person with false memories is convinced that an event actually happened, because that is what he or she remembers. This is the main issue with false memories.

Suggestive interviews have a high risk of producing false memories. Research has demonstrated that repetition of suggestive questions may lead to statements closely similar to accounts of real experiences (Ceci & Bruck, 1993; Eisen, Quas, & Goodman, 2001; Westcott, Davies, & Bull, 2003).

Unfortunately, there are no methods that can be applied to discriminate between false and real memories since their characteristics not always vary. At the same time, different variables affect the memories' characteristic features (e.g.: time passed between the production of false memories and the recall for analysis, and strategies for interview planning) (Manzanero, 2009; Manzanero & Diges, 1994a, 1995).

The CBCA assumption is based on the Undeutsch (1967) hypothesis which establishes that a statement based on a real experience differs from an fabricated statement in its quality and contents. This hypothesis is based

on the fact that a witness who narrates an event may be drawing from an episodic autobiographical representation which is composed by multitude of details, while a statement based on a lie uses scripts which contain only general details about the event. However, this assumption does not discriminate between deliberated lie and false memories.

Volbert and Steller (2014) examined separately the CBCA capacity to discriminate between (a) true account of events and lies, and (b) true account of events and suggested account of events. It was concluded that both the theoretical analysis and the empirical research indicated no comparable differences between true statements and those based on false memories because witnesses who provide declarations based on false memories do not create false statements actively, therefore, they do not make any effort to hide a lie as they perceive those false memories as real.

Then, if the presence of false memories due to suggestive influences is a hypothesis based on suspicion, the only way to assess this presence is to carefully analyze the birth of the statement (circumstances of the first disclosure). The fundamental questions which need to be clarified are: when (in what occasion, or triggered by which stimulus) the witness tells for the first time something, to whom, and what did the witness tell about the event? How did the rest react to this disclosure?, and in which way this account changed over time? If the disclosure was in response to questions by a person who already had suspected sexual abuse or during therapy, it will be impossible to reliably reconstruct accurately those conversations. For that would be necessary a protocol's literal transcript of the therapy sessions or from previous conversations. Unfortunately, the verbatim protocols are not available often. As a consequence, the hypothesis about suggestive influence as a source of the statement could not be rejected.

b) Intentionally false statement (lie)

A statement may be incorrect due to an intentional lie. In this case, if the hypothesis states that the charges are based on a false statement intentionally fabricated, the procedure for its assessment is the criteria analysis. Here, the consistency analysis of statements delivered at different times is the appropriate method, as well as the criteria based content analysis, CBCA.

To sum up, statements can be incorrect; for many reasons, conscious lies are only one of these reasons. Different methods and procedures to assess the precision and accuracy of statements are required for different potential causes of incorrect statements. To limit these assessments only to CBCA is a risk that may conduct to disregard other reasons of incorrect statements. CBCA is only one of SVA tool's appropriate to be used if the hypothesis of an intentional lie is assessed. The SVA methods for assessing different hypotheses are illustrated and summarized in the following table (see Figure 2.)

Application errors

As it has been mentioned before, reduce SVA to CBCA is a serious mistake. At the same time, CBCA has been often and wrongly perceived as a quantitative method in which while more criteria is found in a statement, more probabilities that this statement is considered credible. CBCA has never been conceived as a quantitative method. An analysis of the elements must have been required for this type of method, to prove that each criterion will have the same value for diverse cases and for several witnesses. Only if the

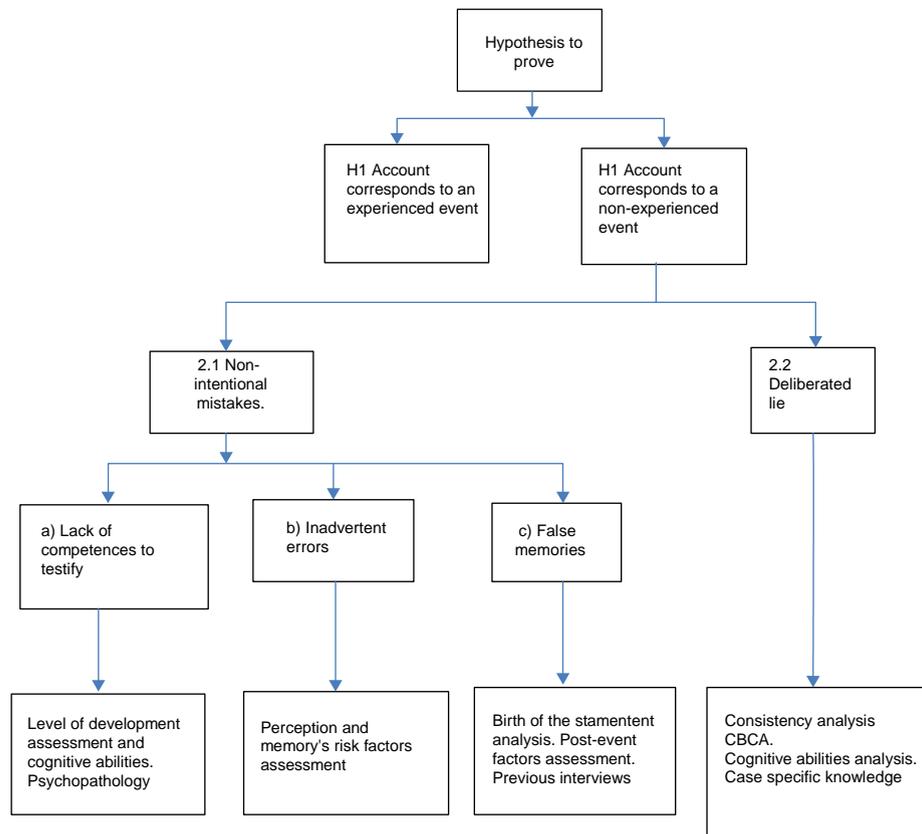


Figure 2. Proposed protocol for detecting sexual abuse

homogeneity and difficulty of each element were the same, only then could have been proved that the criteria could be evaluated quantitatively. Moreover, different criteria can be differently relevant under particular circumstances. Besides, the content quality required to consider that a witness has not been able of making up a statement must meet of course the witness' cognitive capacities, knowledge, experience, complexity of the event in question, and so on. Therefore, to consider SVA and CBCA as quantitative methods— as some sort of check list— represents a serious unfamiliarity with this procedure.

Implementation beyond its limitations

Sometimes, it is forgotten that SVA needs certain requisites to be applied. If these requisites are ignored, it is highly probable that it could lead to wrong conclusions regarding the statement validity. Köhnken (2004) indicates the main limitations for the SVA application.

a) Lack of competences to testify

The witness competence to testify has to be guaranteed before a statement can be assessed using SVA. There is no possible further analysis if this competence is affected significantly or if it is completely missing.

b) No statement available

If a witness is not able or refuses to verbally testify, of course a method based on verbal statement analysis cannot be applied. Sometimes, an unavailable statement or one that cannot be used is replaced by other productions, such as drawings or games.

These methods are not valid for sexual abuse diagnosis (Köhnken, 2006; Scott, Manzanero, Muñoz, & Köhnken, 2014) and therefore, they have high probabilities to produce incorrect conclusions.

c) The relevant sections for a statement diagnosis are too short or too simple.

Although it is evident that statement analysis cannot be applied if there is no statement available, a common error is the CBCA application on a complete statement when only parts of it are questionable. For instance, if a child relates that certain sexual transgressions have taken place at school, and during the process delivers a very detailed account of the school environment, a statement which may appear detailed and long is delivered. However, for the child, the school environment is very familiar, and then he does not need to create it. Only the description of the sexual offense in question is what the child has had to make up. Therefore, CBCA has only to be applied to the statement part where the sexual transgressions are described, not to the school environment's description. If the CBCA is applied to the complete statement, it is probable that it may conduce to wrong conclusions. Then, the relevant parts for the assessment have to be identified before the application of the CBCA. Under the hypothesis that a statement is not correct, those parts which would have been invented are the only ones that are diagnostically relevant. For the application of CBCA, all the rest is irrelevant.

d) Inappropriate interview techniques

Is it well known that suggestive interviews can lead to a content quality similar to those based on real experiences or perceptions (Ceci,

& Bruck 1993; Loftus & Pickrell, 1995). At the same time, repeated interviews has a high level of memory distortion, with negative effects on accuracy and quality of a statement. As stated by Loftus (1996), every time we recall an event, we must reconstruct what the event represents, which involves that with each recollection the memory may be changed by adding new data and the reinterpretation of those already existing. More information will be distorted, as well as the way the subjects express that information, as more time passes and more people participate with questions, because the event has therefore been reconstructed more times. (Manzanero, 1994).

Consequently, as CBCA cannot discriminate between real statements and those resulting from previous suggestive interviews, a result of wrong interviews due to suggestive interviews is that those statements can be deemed as credible. Therefore, before assessing if the application of the CBCA is pertinent, the birth of the statement and its development have to be always examined. CBCA cannot be applied if a witness has been incorrectly interviewed by other persons, e.g.: the police or a therapist, and the evaluator has access only to a summary of the written protocol. Under those circumstances, a textual protocol which includes the verbatim of questions and answers is required. CBCA cannot be applied to a summarized protocol written by an interviewer.

CBCA application necessarily requires a statement obtained using appropriated interviewing techniques. Not only suggestive questions or behaviors have to be avoided: questions that could lead the witness to produce certain criteria have to be specially avoided as well. If the victim is specifically questioned following the criteria, and through suggestive questions too, it seems obvious that the probability of meeting the criteria will increase, although it would result in a fictitious outcome. For this reason, only the information the witness shares spontaneously can be considered usable. The witness must have the chance of producing a free account of events without interruptions coming from questions. On the other hand, some criteria can be destroyed by the interviewer inappropriate behavior. For instance, the *unstructured production* criteria require the account of events not to be guided or structured by the interviewer. As a result, the SVA and CBCA application not only requires a solid background in criteria coding, but also a fundamental training in interviewing techniques.

e) Training

CBCA's criteria are not a secret. Descriptions and applications can be found in several books and many Internet sources. Thus, it is possible to use these descriptions —perhaps not intentionally— to train a witness in the production of high quality statements regarding the CBCA. Vrij, Akehurst, Soukara and Bull (2004a) examined if the CBCA's punctuation could be enhanced when subjects were trained in CBCA criteria. The results demonstrate training on these criteria improved the participants' CBCA scoring.

If this statement was not based on real experiences or perceptions, it may induce the evaluator to error by considering an invented statement as credible. Thus, to examine the story and the statement development is advisable, paying attention on training efforts. This technique is no longer applicable if training efforts are found in the CBCA criteria, because it could result in an incorrect assessment.

Conclusions

On one hand, the need for assessing the witness evidence surges from the forensic psychologist's role in order to contribute with scientifically knowledge based on empirical evidence. The aim is to collaborate with the judicial system and help judges to assess the credibility of this type of statements. On the other hand, the need surges from the results of recent scientific research which states that the sole analysis of the credibility criteria is not enough to discriminate real from false statements. These results show serious doubts on the use by of only a partial statement validity assessment procedure, which can not be able to distort presumption of innocence by itself (Aamodt & Custer, 2006; Akehurst, Bull, Vrij, & Köhnken, 2004; Köhnken, 2014; Manzanero, 2004, 2009; Manzanero & Diges, 1994b; Sporer & Sharman, 2006, Vrij, Akehurst, Soukara, & Bull, 2005; Vrij et al., 2004b).

Some decades ago (Köhnken, 1990; Manzanero, 1991, 1996; Manzanero & Diges, 1993), it was proposed that several points of view would be necessary for the assessment of credibility in forensic contexts emphasizing— in a holistic and general approach to statements— the evaluation of influence factors on the statements accuracy rather than the presence or absence of credibility criteria (Manzanero & González, 2013). The current revisions of SVA state it as such (Köhnken, 2014; Volbert & Steller, 2014). On the other hand, one of the most important elements and crucial of SVA is the strict hypothesis development, that is, the thorough investigation about all the possible sources or origins of a statement. This procedure's quintessential assessment is the development of relevant hypotheses discussed case by case, as a way to inquire the possible causes of a statement.

Unfortunately, the lack of training sometimes has led to reduce SVA to be a criteria application of CBCA, far from the originally conceived procedure. Much of the research dedicated to value these procedures' accuracy (Vrij, 2005) have focused on CBCA rather than the SVA's complete procedure results. Predominantly, the topics addressed include the content analysis accuracy based on certain criteria, agreement among CBCA encoders, frequency of occurrence of CBCA criteria in statements and CBCA scores correlations. However, CBCA is only one of the tools included in the SVA, as it has been mentioned before. The CBCA has clear and precise prescription which should not be used isolated from the SVA complete procedure. SVA contains different tools (assessment of the witness' competences, analysis of the statement's source, risk analysis, consistency analysis, and CBCA). The adequacy of each of these tools will be based on the work hypothesis presented to analyze the possible source of a statement as part of the complete procedure.

SVA has strengths, weaknesses and limitations, of which have to be considered to be applied correctly. The procedure application which considers the technique limitations and technique scope, as a way to avoid that wrong procedures determine invalid results is as important as an appropriate training, that is, training in programs specially designed for this purpose, knowledge towards cognitive processes and training in interview development.

Conflict of interest

The authors of the present article declare not to have any conflict of interest.

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