

## MEMORY AND LANGUAGE IN TESTIMONIES OF 3- TO 6- YEAR OLD CHILDREN

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*La prueba testifical de menores de corta edad es, en muchos casos, la principal y única prueba indiciaria en los procesos penales. La memoria y el lenguaje son dos de los principales componentes en la declaración del menor que requieren un especial análisis, no sólo por el importante papel que juegan, sino también por la relación existente entre ambas capacidades. La vulnerabilidad de la memoria y su posibilidad de ser alterada mediante sugerencias, así como la variabilidad del desarrollo del lenguaje en el menor de 3 a 6 años edad, son dos factores de influencia en la recogida del testimonio. Estos factores, junto con la pericia del entrevistador en la adaptación de la entrevista al menor a la que va dirigida podrán conseguir una recogida de información fiable y libre de subjetividades que facilitarán la investigación de los hechos denunciados. El presente artículo presenta una visión conjunta de ambas capacidades desde la perspectiva del testimonio infantil en el proceso penal.*

**Palabras clave:** Memoria autobiográfica, Lenguaje, Testimonio, Niños preescolares.

*The testimony of pre-school children is, in many cases, the main and only evidence in criminal proceedings. Memory and language are two main components in the statement of the child and they require special analysis, not only because of the important role they play, but also because of the relationship between the two capacities. The vulnerability of memory and its ability to be altered by suggestions, as well as the variability of language development in the 3- to 6-year-old child, are two factors that influence the collection of testimony. These factors, together with the interviewer's skill in adapting the interview to the child, may obtain reliable information that is free of subjectivity and that will facilitate the investigation of the allegations. This article presents an overview of both capabilities, language and memory, from the perspective of child witness testimony as evidence in criminal proceedings.*

**Key words:** Autobiographical memory, Language, Testimony, Preschool children.

**T**his article aims to analyse two of the main capacities when interviewing minors involved as victims or witnesses of a crime: memory and language. When we refer to minors, we are talking about a broad and heterogeneous group whose evolutionary development changes with age. This article will focus on the characteristics of the testimony of children in the age range of 3 to 6 years.

Children in this age group that are the victims of crime or witnesses in criminal cases share several characteristics. Firstly, their vulnerability and fragility, which is doubly exacerbated, directly, as the subject of the crime under investigation, and indirectly, in reliving the events over and over again through the testimony, during the criminal proceedings following the crime. Secondly, the characteristics of the group must be borne in mind, since although the evolutionary stages have been clearly defined, they follow certain continuity that must be evaluated based on the individual characteristics. In addition, one must take into account the peculiarities of the police and criminal

justice process itself, which can negatively influence the testimony. Among these, we highlight the time elapsed between the events reported, the first revelation of the victim and the criminal proceedings, and the number of interviews or examinations which the victim and witnesses must go through. And finally, the peculiar characteristics of memory and language skills, as well as the relationship between the two, which we shall come back to later.

In legal texts such as Circular 3/2009 of the State Attorney General on the protection of child victims and witnesses, it is stated that according to the contributions of the psychology of testimony "an age limit for child testimony" is established, "situated around the age of three, a stage in which there exists greatly reduced cognitive-lexical ability and the psychological expert and the hearsay witness evidence acquire an indisputable role." In other words, from the point of view of this article, the testimony of the child who is a victim or witness of a crime will be influenced significantly by their language development, highly variable in this age range both at the level of lexicon or the number of words the child is capable of using, and at the semantic level, the meaning, sense and interpretation of the words learned, as well as the accuracy of the memories revealed.

In the following sections we will detail the particularities of child testimony in relation to criminal proceedings and we will

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go into greater detail regarding the above-mentioned capabilities.

### **Interviewing minors.**

Here we will highlight two of the biggest challenges that we face in the examination<sup>1</sup> of the child victim or witness aged between three and six years. The first difficulty is determining whether he or she is sufficiently capable of testifying (Köhnken, Manzanero & Scott, 2015; Manzanero & González, 2015) and, if so, whether he or she has any characteristic that must be taken into account in the interview, both when carrying it out and in the subsequent analysis of the information collected (González, Muñoz, Sotoca & Manzanero, 2013; Muñoz et al, 2016.) The second difficulty is in determining whether what the victim reported is their neutral memory, without interference or suggestions or, on the contrary, due to the number of times they have reported the facts to different people, there are errors in the testimony that may skew the information about what happened (Manzanero, 2010). These interviews must be meticulously prepared, understanding what has been learned so far, conducting various interviews with the hearsay witnesses, including the most relevant people from the child's environment, family members and professionals, as well as the person the child first told about what happened (Muñoz et al., 2016).

Next, and before addressing the capabilities of the minors, we will cover the basic characteristics all interviews must have, specifying the relevant information with regard to minors of a very young age. In addition, we will also identify the characteristics that the interviewer must have.

### **Characteristics of the information obtained**

Here we highlight some of the most important characteristics that every interview must have, particularly ones with the objective of gathering information about a crime.

As Márquez (2006) points out, the scientific guarantees of reliability, validity and accuracy indicate the quality of the data obtained by interview. Therefore, we have to answer certain questions relating to the information obtained during the interview, which must enable us to assess the following aspects:

- ✓ Reliability: the information that was obtained in the statement corresponds to that which was intended to be obtained.
- ✓ Accuracy: the information reported accurately represents what happened.
- ✓ Validity: the information obtained represents what happened.

Any forensic interview (police or judicial) must comply with these characteristics. Therefore, the training of interviewers is essential for managing the information obtained during the interactive process between the interviewer and the interviewee, and there must be no preconceived expectations, potential bias or prejudice. Moreover, the interviewer must conduct the interview while also facilitating the free account. Also an

appropriate level of motivation must be attained, because an excess of motivation on the part of the interviewee/victim can be negative because it could provide answers of high social desirability, just as a low motivation can lead to negativism, acquiescence or a lack of precision in the responses. Thus, during the interview, as complete and accurate a testimony as possible must be obtained, facilitating both the respondent's memory and their story, avoiding re-victimization as the events experienced are relived over and over again.

### **Forensic vs clinical interview**

The interview is one of the most used instruments for obtaining information. There are different types of interviews related to the scope of this work, including the clinical and forensic interview (police and/or judicial), and the various subtypes that are included in each one. Despite the fact that all of these interviews are aimed at obtaining the account of the interviewee, they will be different from each other, both in the format in which they are carried out and in the subsequent analysis (Echeburúa, Muñoz & Loinaz, 2011).

At one extreme is the clinical interview in which it is assumed that what the patient describes is true, and treatment is sought for the symptoms presented. Based on the information provided by the interviewee, the assessment by the clinical psychologist is begun. At the opposite pole is the forensic interview, which focuses on obtaining the most complete statement possible about the facts under investigation, which serves as indicia or evidence for the imputation and resolution of the case. In this type of interview there are many factors involved in both the quality and quantity of the information in the testimony.

### **WHY IT IS NECESSARY TO UNDERSTAND THE ABILITY TO TESTIFY OF CHILDREN BETWEEN THE AGES OF 3 AND 6**

The psychology of testimony refers to the understanding of the basic psychological processes that are involved when collecting and assessing the witness evidence (Manzanero, 2008). In the case of minors and very young children we have to take into account these basic psychological processes and how they are in relation to the evolutionary development of the child in question.

In relation to the analysis of the intellectual abilities and capabilities of children, the various studies and investigations refer to a general intelligence factor (g). However, "when reviewing the wide variety of theories on the structure of capabilities it became clear that none of them by itself was totally valid or universally accepted among the professionals of theory and practice" (Elliot, Smith & McCulloch, 2011, p. 40). Therefore, there is no commonly accepted theory by all of the psychological currents, although there is a common theoretical and empirical core that emphasizes that human capabilities cannot be expressed by a single cognitive factor, and that "these

<sup>1</sup> The term "examining the minor" refers to the interview carried out with minors that are the victims or witnesses in police or court proceedings.



human aptitudes make up multiple dimensions in which individuals show observable and solid differences (...) they are interrelated, but not completely overlapping; consequently many of them are differentiable" (Carroll, 1993). On the other hand, some studies have shown little relationship between intelligence quotient (IQ) as a general measure of intelligence and the ability to make a statement or identify a suspect (Kebbell & Hatton, 1999; Manzanero, Contreras, Recio, Alemany & Martorell, 2012).

All of this serves to highlight how difficult it would be to establish a single criterion both of the factors that must be evaluated to determine human aptitudes, and regarding which instruments should be used. However, it is essential to assess the capabilities for testifying with two objectives: to adapt interview protocols to the capabilities of the witnesses and then to evaluate appropriately the information collected. Therefore, a few years ago (Contreras, Silva & Manzanero, 2015; Manzanero & González, 2013; Silva, 2013), we began to develop a specific instrument to facilitate this evaluation, beyond the existing standard tests which have proven to be of very limited usefulness, as it has already been pointed out. As such, two instruments have been developed and are currently under validation: a) *The Moral Drawing* (Manzanero & González, 2013) and b) *the Instrument for Evaluating Capabilities or CAPALIST* (Contreras et al, 2015; Silva, 2013). The latter considers a number of capabilities to bear in mind when assessing the testimony given by minors:

- a) Cognitive.
  - a. Space.- Where? Are they capable of locating themselves in the present space?
  - b. Time. - When? Can they distinguish between different moments?
    - i. Present.- Are they capable of identifying the day/month/year of the moment of the interview?
    - ii. Past.- Are they capable of identifying the day/month/year of the events reported or another event in the recent past?
  - c. Descriptions.- Who? What? How?
    - i. People.- Are they capable of distinguishing between people they know and strangers?
    - ii. Places.- Are they capable of describing the place where they are?
    - iii. Things.- Are they capable of identifying certain animate or inanimate objects?
    - iv. Chains of actions.- Are they capable of describing a series of actions adequately?
  - d. Quantity.- How many? Are they capable of distinguishing between many and a few?
  - e. Action consequences. Can they describe the consequences of a certain action?
- b) Communication.
  - a. Verbal Language
    - i. Oral Expression
    - ii. Oral Comprehension

- b. Non Verbal Language
  - i. Expressivity
- c) Social Interaction
  - a. Empathy (They recognize their own feelings, acknowledge their feelings and those of others, and finally they acknowledge their own feelings, those of others and they identify with the latter.)
  - b. Assertiveness (the person is assertive, passive or aggressive)
  - c. Extraversion
  - d. Acquiescence (referring to the tendency to answer yes or show conformity)
  - e. Social desirability (the tendency to give answers that are considered socially acceptable)
- d) Identifying Mental States / Emotions
  - a. Their own
  - b. Others'
- e) Moral Capacity
  - a. Distinguish between good and bad, truth and lies
- f) Capacity for representation
  - a. Distinguishing reality/fantasy
  - b. Capacity for imagination
  - c. Reproducing scenes
  - d. Reproducing conversations
  - e. Assigning roles (I/you/he)

In these cases, the personnel specialized in conducting interviews with minors must answer all of these questions in order to establish the starting point for the proper investigation of facts that may be characteristic of a crime. This starting point will not only guide how the questions are asked in the examination, but also later it will serve to evaluate the testimony provided by the child.

However, this is not the only thing to consider. In the case of the testimony and especially with very young children one must take into account the following, among other variables: the number of times they have given an account of the facts, the time elapsed between the occurrence of the events and the moment of the interview, the interviewer characteristics and the way of conducting the interview. It is equally important to evaluate the influence that may have arisen from listening to their reference group (parents, teachers, etc.) and the interpretation of the story in relation to their own beliefs.

In short, we can see that there are multiple factors that can affect the testimony, so in this review we will address only two of the basic psychological processes, the development of the memory and language processes in the infant stage.

#### PROMINENT ROLE OF MEMORY AND LANGUAGE IN THE TESTIMONY

Memory and language play an important role in the testimony, so we are going to focus on developing the following issues in relation to statements of children between 3 and 6 years of age:

- ✓ What are the characteristics of their memory processes?
- ✓ What is the evolutionary development of language?



- ✓ What is the relationship between memory and language at this age?
  - ✓ What is the reliability and validity of their memories?
- In the following points, all of these issues will be addressed in relation to the testimony.

### **Memory processes in the statements of minors**

There are many types of memory (Baddeley, Eysenck & Anderson, 2010; Manzanero & Álvarez, 2015). Here we are primarily interested in obtaining a deeper understanding of autobiographical memories. This is a special type of episodic memory, since the task required of witnesses and victims is to retell an event they have experienced. Anyway, when talking about memory we refer to the ability to record, store, process and, subsequently, retrieve information. Precisely because of the ability of our mind to develop the information obtained through our sensory system, we must highlight the vulnerability of memory to be altered from both an internal and external perspective of the individual. So, in the case of minors in general, and even more so in those aged between 3 and 6, it is important to note the suggestibility to which they may be victims. Various investigations on child suggestibility (Ceci, Ross & Toglia, 1987; Hritz et al, 2015) indicate the existence of several factors that increase suggestibility in children, among which are: their age, the distance in time between the event experienced and the moment when the child is being asked about it, the type of questions used and the child's characteristics from both a cognitive and sociocultural point of view.

Beyond the theoretical point of view, the aforementioned Circular 3/2009 of the State Attorney General on the protection of victims and witnesses indicates the general guidelines in the interrogation of children. This circular includes factors such as those seen so far, but in this case applied to a more practical and real context: the courtroom. Among the aforementioned guidelines, delays in the proceedings in which the minors are involved are taken into account, indicating that this factor is "one of the primary stress-inducing agents in the child witness, the delay between the events and the moment of the testimony" (p. 53). Also indicated are the characteristics of interviews highlighting the need to instil confidence, to use language appropriate to their level of understanding as well as the type of questions that are asked. In these questions free recall must be facilitated and suggestion avoided, noting on this latter issue that "the degree of suggestion a question may have depends not only on its grammatical and semantic structure but also on the tone and authority of the interrogator" (p. 55).

Another point to highlight, in relation to the memory processes in the statements of minors, is what is known as infantile amnesia, which is the inability to remember events from the first five years of life. Regarding this point there are several different areas of theory that explain this phenomenon. On one hand there is the inaccessibility, according to which the information is found but cannot be accessed due to contextual changes, understood as the context changes produced over time, due

both to changes in our environment and to changes in our own life cycle. Infantile amnesia could be linked in part to changes in the environmental, cognitive and perhaps emotional context (Anderson, 2010). The second area of theory that explains this phenomenon refers to the specific neurological immaturity of preschool children (Manzanero & Álvarez, 2015).

Moreover, despite setting this age limit there are also other points of view in which the relationship of the consistency of these autobiographical memories stems from the relationship between consolidation of the child's cognitive self, the sociocultural environment surrounding them as well as the appearance and use of language, as indicated in theories developed by Nelson and Fivush (2004) or Howe and Courage (1997), which will see in the next point.

In any case, childhood memories mainly stem from the development of information through different sources (photographs, stories of family members, etc.), thus diverting from the actual experience of these events and becoming fabricated or constructed memories.

### **Language development**

The comprehensive and detailed study of language development and its features exceed the scope of this article. However, it is easy to imagine the important role that language plays in the psychology of testimony. Throughout its development, the language ability of a child aged between three and six years old will either allow or limit both the understanding of the questions asked and the ability to describe and indicate the answers in relation to the events experienced.

"Language is an essential element for human thought and it provides unexpected possibilities. It is essential in referring to the past or the future, in considering hypotheses or conditional situations, but also without it communication would be extremely limited and laborious" (Delval, 2008, p. 262).

One of the issues that concerns us, within the scope of this article, is whether language development precedes conceptual development or whether in fact the opposite occurs. Several studies have explored this relationship. The starting point and classic *par excellence* (Piaget, 1990) stated that conceptual development occurred first, and after that came language development. However, this classical conception has had as many followers as it has detractors, such as for example Chomsky's linguistics (Chomsky, 1987), which contrary to the Piagetian line of thought emphasizes the nativist and creative role of language development.

This area of study, which aims to determine the relationship between language development and the development of cognitive abilities (like children's theories of mind), authors such as Bermúdez-Jaimes and Sastre-Gómez (2010) draw from studies conducted by Gopnik and Melzoff (1999) among others, which indicate "the existence of a bidirectional relationship between language development and cognitive development and suggest that these skills may be important for understanding false belief" (p. 852). These skills indicated by Gopnik and



Melzoff refer to the construct of social cognition which refers to the individual's ability to put him- or herself in the position of another person in various aspects, including the epistemic, understood as the ability of the human being to understand the knowledge of another. Moll and Meltzoff (2011) indicate three different levels of adoption of perspective, which go from the simplicity (unique to humans) of sharing attention with the other to the complexity of the recursive mental inference known as third order or third level intentionality and which refers to the Theory of Mind (Premack & Woodruff, 1978; Wimmer & Perner, 1983). However, the empirical results of this research indicate that "the hypothesis that holds that the development of comprehension of children's theories of mind is subsidiary to semantic language development in children between 3 and 4 years of age (...) in the sense of the primacy of linguistic development over socio-cognitive development" (Bermúdez-Jaimes & Sastre-Gómez, 2010, p. 859).

Therefore, despite the existence of different theoretical aspects in relation to conceptual and linguistic development, a clear relationship between the development of the theory of mind and language development is established, and around approximately four years of age there is an important conceptual change in the child which develops alongside their language development (Gómez, 2007).

Now, everything stated so far indicates that in addition to the important role of language development in children between 3 and 6 years of age, both in relation to their development phase and their personal, family and environment characteristics, one must take into account their ability not only to understand their own experiential perspective, but also to understand different perspectives to their own, in other words, it is necessary to understand the development of intentionality in the child.

### ***The relationship between memory and language***

According to the theory of Social and Cultural Development by Nelson and Fivush (2004), autobiographical memory varies greatly from one individual to another. The memory you have of yourself is not isolated, but instead is immersed in a social culture, in which the contents of these memories are valued and shared. To demonstrate this point of view, the authors point out that their theory is based on three distinct arguments: a) autobiographical memory appears gradually in the preschool years; b) language is a fundamental socio-cultural tool in the development of autobiographical memory; c) there are individual cultural and gender differences throughout the development which must be checked.

Despite various studies on evolutionary development in children in the first five years of life, there is no irrefutable proof to determine the importance of language in the consolidation of memories. However, various studies such as those mentioned above as well as those carried out by Wang (2013) have indicated that autobiographical memory varies from one culture to another. In her research, Wang finds notable differences between cultures (the samples were from Western and Eastern

cultures) and she points out, among other components that determine and influence the formation of these autobiographical memories, how the speech of parents toward their children is copied as well as how children listen to their parents. Although there is no specific test to determine that language is essential for autobiographical memory, there is clear evidence that it is an important contribution. As Nelson (2014, p.17) points out, "episodic memories (ones that make up autobiographical memory) appear to exist as fragments retained from an experience in early childhood, but they are usually not retained as complete events or for large periods of time until after three years of age. These timescales suggest that language acquisition may be an important contribution to the establishment of autobiographical memory; but if so, how does it happen and when?"

In the different contributions of the aforementioned writer, it is noted that despite the existence of a large body of research on language acquisition, it has always been carried out in isolation without interrelating this development with various developmental milestones throughout this first period of childhood.

### ***Children as witnesses: The reliability and validity of memories in children of this age***

Addressing the issue of the validity and reliability of childhood memories means talking about the credibility of child testimony. Throughout history the child witness has been categorized in different ways, being essentially labelled as unreliable, even more so if there is a lack of other evidence to support the facts related by the minors. From the 1980s and 1990s this view changed, going to the opposite pole, in certain cases child testimony is even seen as more credible than the testimony of adults (Manzanero, 2010). However, at present this credibility is questioned, especially in cases where the child is the victim of a crime against sexual freedom and integrity, in which the analysis and assessment of the credibility of the child's testimony is the main evidence to refute the presumption of innocence of an accused, since it is difficult to diagnose sexual abuse from clinical indicators (Scott, Manzanero, Muñoz, & Köhnken, 2014). *The incriminating statement of a minor, even one affected by mental retardation, is perfectly suited to be assessed by the judges and, where appropriate, to rebut the presumption of innocence of the person who is incriminated therein.* (STS No. 175/2008 of 14 May).

For the assessment of the credibility of the child, the court requests an expert report on the credibility or veracity of the testimony such that the circular 3/2009 states in relation to the assessment of the child witness "The expert opinion on the credibility of the statement of a minor, contrasting the child's statements with empirical data produced by this science, can help the Court to establish whether or not there are elements to doubt their reliability" (STSS No. 715/2003 of May 16 and others). However due to the characteristics surrounding the testimony of a minor, the aforementioned Circular anticipates that the findings will not pertain to the exact sciences, but rather they will be specific to the testimony quality "The findings of these psychological reports of technical assessment of the



*testimony of a minor and analysis of the veracity of the statement can never achieve absolute precision. Declarations such as that the story is "very probably credible" make up "the top category of all possible outcomes, since it is not permitted to establish scientifically, of course, a statement in terms of mathematical accuracy, but only an orderly qualitative assessment (vid. STS No. 1769/2001 of October 5).*

Now, after raising the judicial point of view on the credibility of the testimony of a minor of a very young age, we must evaluate the instruments used to date in psychology for producing reports on the credibility of testimony.

At present, the technique most commonly used in the Spanish forensic context to assess the credibility of the testimony of children that are the alleged victims of sexual abuse is the Statement Validity Assessment system (SVA; Steller & Köhnken, 1989; Raskin & Esplín, 1991). This technique consists of three main elements: an interview with the child aimed at obtaining as comprehensive and accurate a testimony as possible; analysis of the child's account according to the Criteria-Based Content Analysis (CBCA); and implementation of the Validity Checklist that weights the external factors (for a current review, see Köhnken et al., 2015).

However, this method is not without its critics (Manzanero & Muñoz, 2011), often supported by malpractice in its application, as well as by the weaknesses of the method itself. The aforementioned criticisms include the lack of scientific validity of this method based on the content of the testimonies of victims or witnesses.

An alternative proposal to the SVA system is the evaluation of the testimony from a general perspective. An example is the holistic protocol for the evaluation of the testimony HELPT; (Manzanero & González, 2013, 2015). The HELPT protocol is based on the examination of the case file analytically and controlling for the potential biases that may arise in carrying out this task, to develop specific hypotheses subsequently about the case in question and the preparation of the later interrogation (Scott & Manzanero, 2015).

## CONCLUSIONS

This article has presented the current state of research on the credibility of testimony, which attempts to provide an analysis protocol from a more holistic perspective, such as the aforementioned HELPT, extracting the maximum unbiased information, and thus to begin with different hypotheses and assess the possible factors of influence. Nevertheless, it is still necessary to advance in this research, so that the result of the forensic practice of evaluation of the testimony obtains what Rassin (1999) asserted: For a judicial system to function properly, it should not tolerate more than 0.4% of false positives resulting in an innocent person being found guilty.

Therefore, despite all the work that remains to be done, new lines of research have been launched, such as the development of the CAPALIST instrument (Contreras et al., 2015). Research with this instrument uses as a source the analysis of the

capabilities of the victim at the time the charges were brought. This way one can provide the investigation and the subsequent collection of the account of the criminal acts with an appropriate baseline which supports the forensic psychologist responsible for the analysis of the credibility of the testimony. Also, inappropriate generalizations can be avoided about the child's ability to testify on the particular events suffered by the victim of a crime. Contreras et al (2015) applied the questionnaire in actual cases of sexual abuse victims with intellectual disability and the results showed high inter-rater agreement. Therefore, CAPALIST could be useful in assessing the ability to testify of victims with intellectual disability. In parallel, currently its applicability is being analysed in children aged between 3 and 5 years old, since both groups, highly vulnerable, are sometimes distanced from the process due to the erroneous belief that their accounts may be unreliable or because it is assumed that the minors lack sufficient capabilities to give an account with significant details for the investigation.

From this review, we have found that different studies indicate the relationship that exists between language and memory in children of a very young age, however, this relationship is not exclusive but rather it is interrelated with other capabilities (as can be seen in the capabilities evaluated in the CAPALIST questionnaire, mentioned above in this article). Hence the need for research investigations in order to equip the professionals with valid tools to assess these capabilities as broadly and accurately as possible, assumed necessary for the collection of testimony on events that are of a criminal nature. The investigations mentioned are examples that demonstrate the feasibility of the analysis of these capabilities prior to investigating the facts and serve as a reliable method for assessing the credibility of the testimony (Contreras et al, 2015; Manzanero & González, 2013, 2015; Scott & Manzanero, 2015).

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