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Child witnesses: A study of memory and suggestibility

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Abstract

Aim. To investigate the influence of various factors on the ability of primary school children (aged 6-9 years) to refer an event that occurred during their life.

Materials and Methods. The factors analyzed were: the time since the event occurred; the role the child had in the event; the type of questions asked to elicit the account.

Results. The results of this research indicate that 52.4% of 6-year-old children are able to describe the main elements of the event if they are allowed to give a free account. Asking direct questions does not improve the quality of the narrative. By contrast, in 9-year-old children the quantity of data collected is improved if direct questions are asked. A role as a participant in the event improves the quality of the child's evidence but only in the group of children aged 9, whereas in younger children the difference is not significant. At the age of 9, the child's resistance to leading questions is already quite good (40.7%), whereas children of 6 are much more suggestible.

Conclusions. The Authors conclude this work by making some reflections on the possible use of these findings in Law Courts, and on the need for a highly specific training of experts involved in the task of collecting evidence from young children. ***Clin Ter 2013; 164(2):e115-119.*** **doi: 10.7417/CT.2013.1542**

Key words: *child witness, eyewitness memory, participant role, repeated interviews, suggestibility*

Introduction

The use of evidence collected from young children has long been an object of much scientific interest, also in view of its important implications in the forensic field. Various researches have supported the hypothesis that small children can provide a reliable account of an event (1, 2).

However, many factors can affect a child's ability to recount an experience, first of all *age*. The ability to describe an autobiographical event improves progressively in children from the age of 4 to 7, but only as from the age of 8-10 years will memories acquire a structure, content and organization like those of an adult (3-8).

The quantity and quality of the details contained in the account are also affected by the *time* that has passed since the event occurred (9, 10). Moderate stress can foster a better quality of the memory but excessive stress will negatively influence the perception and mental storage of the event (11-15, 50-51).

In our research we have focused on these two aspects, as well as on the role played by the child during the course of the event, and the type of questions asked to elicit "evidence" about it.

As regards to the *role* played by the child in the event, previous research has indicated that the event is more accurately described if the episode was directly experienced by the child or s/he was directly involved in the action. A less precise story emerges if the child was only an onlooker or if s/he has just to repeat a story recounted by another person (2, 16-19).

Finally, a child's ability to recount an event can be affected by the *type of questions* asked. Considerable research has been focused on investigating the influence of asking a child leading questions. This can induce the child to take over, or confirm, elements present in the question asked (19-31).

Many Authors have shown that pre-school age children are more suggestible than those aged 7 years, and that the latter are more suggestible than those aged 9. In short, suggestibility tends to decline gradually as the child develops (8, 17, 32-36). Even in adolescents and adults there is still a risk of suggestibility but at this stage it is linked to other factors, of a cognitive, emotional and social nature (11, 14, 37, 38).

Moreover, other research has suggested that children tend to change their answer if the same question is repeated once more by the interviewer (39, 40). Eisen and Goodman (27) found that since a child believes that an adult "knows everything", if an adult repeats a question the child may think s/he has given the wrong answer and so change it. This idea that adults are omniscient could be the reason for the child's wish to please them (41, 42).

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Sometimes even the questions the parents ask the child to find out what happened can influence their memories. In fact, content suggested by the parents in their questions can enter the child's mind and replace the original memory, either to fill a memory gap or as a complete substitution of the previous recall (2, 43, 44). It is therefore possible for questions asked by parents or important adults, like officials, to create pseudo-memories generated externally (17, 32, 45-47).

Aim of the present research is to study the interference of some factors on the ability of primary school age children (6 and 9 years old) to refer an event that occurred in their lives. The factors studied were: age, role in the event, type of questions asked.

Materials and Methods

The study sample consisted of 141 children (M = 76; F = 65), resident in two small towns in the province of Bari (Southern Italy) each with about 30,000 inhabitants, one located on the coast and the other inland. The children were attending the first and third primary school classes (6 years = 82; 9 years =59). The research was authorized by the school authorities and written informed consent was obtained from all parents.

The study design consisted of two phases, with an interval of 5 days between them. In the first phase, lasting 30 minutes, the researchers interrupted a class (of about 30 children, all much the same age) and presented themselves as University researchers. They said they needed to write an article about what kind of relation the children had with cartoon movies. The children were shown a brief cartoon film (lasting about 7 minutes) about a well known character, chosen specifically because it is a favourite of children of that age. Apart from the usual characters, in one scene a bull was challenged with a red tablecloth and this was the event it was hoped that the child would remember.

At the end of the film some children were randomly selected and asked to act out the story they had just seen. To help them with this task, they were given distinctive clothes and objects used by the cartoon characters to be impersonated (they could choose which one they wanted to be). This investigation phase was the only true "contact" between the researchers and the children. Of the 141 study subjects, 54 were randomly extracted to mime a character (*participants*); the remaining 87 were the *observer* group.

Before the *participants* started to act, an element of disturbance was introduced: a man dressed in a black cape came into the room without knocking. The "*black man*" had to wander around in the room as if he was looking for something and then – without saying a word – to move among the children without ever touching them. Instead, he would touch the teacher and one of the researchers, who were instructed to take no notice. When he left the room the children asked a barrage of questions. The teacher and researchers responded to this understandable reaction by reassuring them but never really giving an explanation ("I don't know who he is", "I don't know him"), and then asked the children to start to act out the cartoon film story.

At the end, all the children were invited to pose for a photo to commemorate the experience. This element was introduced into the design with the aim of reproducing a situation that is sometimes present in denunciations of sexual abuse, namely photo lineups of the young victims.

This ended the first phase of the research, that is aimed to create an event outside the normal school routine in the children's lives that would engage their interest without upsetting them. However, a specific element was introduced in the form of the "black man", to see what effect this had on the quality of their recall.

After five days, the children underwent an individual interview, carried out by expert psychologists. We had drawn up a dedicated questionnaire for use in this interview, consisting of 19 questions:

1 open question proposed to elicit a free tale.

6 direct closed structure questions with a Yes/No answer, referred to circumstances that really happened during the course of the event. These were not leading questions but referred to real happenings (e.g. "*Did some of your companions act the story after you had watched the film*?").

12 leading/misleading closed structure questions with a Yes/No answer containing false information (e.g. "*Is it true that my study companions used a video camera to film the acting?"*). Among these questions one was designed to explore the children's susceptibility to the influence of the majority effect ("*Your classmates told us that my study companions forgot the videocamera at school, what do you think?").*

At the end, the psychologist selected two among the leading/misleading questions that the child had "resisted" and asked them once more, to verify what effect repeating the question had.

Data processing was done with SPSS® software. The Chi Square and Mann-Whitney test were used to compare variables. Significance was set at a value of $p \leq 0.05$.

Results

The answers of children gave to the open question, that invited a free account, were examined to assess their ability to refer the essential elements proposed in the study, i.e., the story of the cartoon film and the acting out by classmates. These two main phases of the experience were well told by 51.8% of the sample, while 14.9% added further elements. Therefore, overall, 67% of the entire sample was able to recount the main happenings without introducing false elements, when allowed to give a free account.

There were marked differences between the two age groups ($p<0.001$; $\chi^2 = 19.853$). Among the 9-year-old children, 86.4% were able to refer both phases versus only 52.4% of the 6-year-old children. Memory gaps were observed in only 13.6% of the 9-year-olds versus 35.4% of the 6-year-olds; to the latter group must also be added 12.2%, who had no memory at all of any of it.

Table 1 shows the differences between the two groups.

Taken together, no significant differences emerged in the quality of the recall according to whether the child played the role of "*participant*" in the acting out or "*observer*" (Tab. 2), at least during the free account phase.

The different role took on significance only in the group of 9-year-olds, when assessing the response to direct que-

Table 1. Free account by Age

Age	No memory	Cartoon or acting out	Cartoon and acting out	Cartoon, acting out and other
6-year-olds	12.2%	35.4%	39.0%	13.4%
9-year-olds	0.0%	13.6%	**69.5%**	**16.9%**
Tot.	7.1%	26.2%	51.8%	14.9%

Table 2. Free account – Different Role.

Role	No memory	Cartoon or acting out	Cartoon and acting out	Cartoon, acting out and other
Observer	8.0%	27.6%	**50.6%**	**13.8%**
Participant	5.6%	24.1%	**53.7%**	**16.7%**
Tot.	7.1%	26.2%	51.8%	14.9%

Table 3. Direct questions - Different Role.

9-year-olds	Correct Answers						
	0	1	2	3	4	5	6
Observers	0.0%	0.0%	6.1%	3.0%	33.3%	45.5%	12.1%
Participants	0.0%	0.0%	0.0%	7.7%	23.1%	19.2%	**50.0%**

stions (Table 3); 50% of the *participants* correctly answered all the questions, versus 12.1% of the *observers*. Of the remaining *participants,* 19.2% correctly answered 5 out of 6 questions, versus 45.5% of the observers. In practice, in our sample the ability to refer an event correctly seems to be strongly linked to the role the subject played, but only in the group of 9-year-olds.

Suggestibility was assessed in terms of the child's resistance to leading or misleading questions. In our sample, the result was proportional to age (χ^2=30.876, p=0.001); 40.7% of the 9-year-olds (Tab. 4) did not allow themselves to be influenced by any of the 11 leading questions, whereas only 14.6% of the 6-year-olds were able to resist such suggestions. In the group of 9-year-olds, suggestibility was observed in a maximum of 4 questions out of the 11; in the group of 6-year-olds, this value reached 10 questions out of 11.

Then, we assessed the effect of repeating the question, to see whether this induced the children to modify their original correct answer. In our sample, the "repetition" effect had a modest impact overall, in the sense that only 15.6% of the entire sample changed their answer. The effect of question repetition on suggestibility again appears to be correlated

Table 4. Leading Questions

Age	Number of questions inducing suggestibility											
	none	1	2	3	4	5	6	7	8	9	10	11
6-year-olds	14.6%	24.4%	12.2%	13.4%	9.8%	2.4%	8.5%	6.1%	6.1%	1.2%	1.2%	0.0%
9-year-olds	40.7%	28.8%	22.0%	5.1%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

to age. In fact, only 5.1% of the 9-year-olds changed their answer, versus 23.1% of the 6-year-olds (χ^2=8.691, p< 0.02).

Among the leading/misleading questions, we inserted one that contained false information, as well as the statement that this had been referred by the child's classmates. This aimed to investigate the influence of the majority opinion: at this stage, 41.8% of the sample yielded to the pressure, again showing ample differences between the two age groups: 6-year-olds (46.3%) and 9-year-olds (35.6%). Notably, girls showed a stronger resistance to the majority opinion (32.3%) than boys (50.0%) (χ^2=4.507, p<0.05).

Discussion

Various Authors have demonstrated that when children are allowed to give a free account and the interviewer avoids asking leading questions, they are able to provide reliable information (39,43). Our results support these findings; 67% of our sample were able to refer the main elements characterizing the event, in a free account. As expected, the group of 9-year-olds did much better, but in our view a remarkable number of 6-year-olds (52.4%) were able to give a reasonable account.

In general, the use of direct questions (not leading or misleading) did not seem to improve the quality of the children's memories. This method yielded good results only in the group of 9-year-olds and in these, only if they had had an active part in the event, as a "participant" not an "observer".

A direct involvement in the event improved the quality of the account (16, 19, 48) of the older group of children, whereas there were no significant differences in the younger group. This observation may, in our view, have important implications in the forensic field, where this approach is often adopted.

While it is well known that leading/misleading questions increase the risk of interfering with the child's memory of an event (15, 49), it is notable how strong the resistance to suggestion was already by the age of 9: 40.7% of the 9-year-olds were able to "resist" suggestion for all 11 questions, while 28.8% gave way only for one of them. This means that among the 9-year-olds, 3 out of 4 succeeded in holding out despite the deliberate employment of leading questions to confuse them, even if these were repeated more than once.

The group of 6-year-olds had much less resistance, being susceptible both to leading questions and to repetition. In our experience the difference between the two age groups was very marked.

The data emerging from the present research confirm the assumption that children can be reliable witnesses if they are listened to by expert questioners adopting a correct methodology, based on the avoidance of leading/misleading questions and on allowing the child to tell the tale in her/his own way, as freely and spontaneously as possible. Another important point is that the child, especially of a young age, should not be expected to repeat the account several times.

Our findings demonstrate that 6-year-old children are highly susceptible both to leading questions and to repetition of the question more than once. In particular, this last effect provokes reflection on the potential negative effects produced by repeated interviewing of under-age children suspected to be victims of child abuse. To safeguard the genuineness of their account it seems to best to attempt to limit the testimony to a single account, heard by experts, and recorded, so as to act as a faithful account in later legislative hearings, available to all parties. This could also circumvent the risk of potential negative effects on their psyche, since children aged 6 years or less are often unable to understand why adults keep getting them to recount the same event again and again, especially if the tale evokes painful or distressing memories.

In Italy, questioning of such young children is rarely conducted by experts and it is therefore an essential issue to plan adequate training in eliciting reliable testimony from young children. Experts hearing children's testimony at health service facilities, or to give an expert opinion commissioned by the Judge, must be aware of the possibilities but also the limits of their testimony, and should adapt their interviewing style to the age of the child. Adoption of this line of behaviour can preserve the possibility of employing child witnesses to gain an eyewitness account of an event, while safeguarding the psychological equilibrium of the child.

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