**Effects of memory in the testimonies of children in alleged sexual abuse**

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**Introduction**

In child sexual abuse (CSA) investigations, especially in the absence of physical findings, a properly conducted interview that taps the child’s memory and enables the child to narrate the event may become the most important piece of evidence to confirm or exclude an alleged sexual act¹². In Sri Lanka, where the availability of forensic child care services is limited, specialist and non-specialist health care personnel in hospital settings are often called upon to interview and examine victims of child sexual abuse. Often, the history given by the child to the doctor is considered by the courts as the version of the abuse upon which subsequent evidence is interpreted and therefore the reliability of that testimony has a huge bearing on the outcome of the case.

When dealing with child sexual abuse cases, it is essential for investigators, judges and jurors to understand how children perceive, store and retrieve their experiences of an event and they must be aware of the many features of memory development, including its relationship to language development as well as how memory can be influenced and distorted with each retrieval. These aspects are vital to ensure that the testimony obtained from a child reliably reflects the abusive event so that the ultimate decision on the case is fair to both the victim and the perpetrator².

A child’s capacity to pay attention, encode, store and relate an abusive event will depend greatly on the mental age, maturity and language development of the child³. Lapses, omissions or even alterations in memory may occur due to several other factors including, the influence and persuasiveness of the perpetrator, time since the event to disclosure, the level of stress during disclosure and how the child is being interviewed⁴⁵. The memory of any individual can be reconstructed or blocked even at retrieval⁶ depending on the interference and the other experiences in life. It has been shown that verbal recollection of memories may be limited if the alleged act has been overtly traumatic to the victim⁷. Thus the manner in which the perpetrator engages the child in the sexual act, especially the level of co-existing emotional and physical trauma that the child experiences during the act, may also distort his or her testimony.

This article aims to provide an overview on some basic factors influencing the child’s memory from storage to recall and how these factors may affect the reliability of a child victim’s testimony.

**Explicit & implicit memory**

Memory is the output of a complex process of encoding, storing and retrieving information. It can take two forms: explicit memory, which is the type that can be consciously recalled, or implicit memory, which is the type that cannot be consciously recalled or explained⁸⁹. The child’s memory of an abusive act is influenced by his or her experiences, perceptions, emotions as well as information regarding such acts, which the child may receive from numerous sources including the abuser. Each of these factors may affect the memory at any point during encoding, storage or retrieval. The level of language development at the time of the abusive event will also be an influencing factor for the encoding and storage of memories¹⁰ and this factor is described further below. Implicit memory, which may manifest as behaviours and comments especially in preschool children, may also provide useful indicators towards an abusive event. In such situations, supplementing the child’s testimony with evidence of such behaviours and comments obtained from health professionals, teachers and caregivers would be beneficial to the case¹¹.

**Verbatim memory vs gist memory**

The process by which experiences affect memory is explained as “fuzzy trace theory”⁵¹². Verbatim memory is based on actual facts whereas gist memory is based on the meaning or emotions that
are generated with those facts. It is well known that gist memory can lead to false memory reports\textsuperscript{5,13,14}. When interviewing adolescents and older children, interviewers should be aware of the possibility of the existence of the gist memory where the interviewee could possibly alter factual descriptions of an event such as time, location, clothing worn by the perpetrator etc. For example, the emotion of fear may lead to the victim recalling that the perpetrator held a knife in his hand during the act whereas the actual memory may have been seeing the perpetrator working in the kitchen with a knife several days later. The influence of gist memory could be worse in cases of repeated abuse, where the victim may mix-up bits and pieces of different events. Doubts would then be raised on the veracity of the victim’s testimony and may even be perceived as a case of deliberate lying. Such instances, meanwhile, would be sufficient to dismiss the criminal charges of CSA which in turn could further traumatise the victim. In contrast, narratives based on verbatim memory such as those that are given by very young children are likely to be very short and although they may be deficient in many details, they are likely to be more credible\textsuperscript{5,12}.

**Suggestibility**

The memory of an event can be influenced by other people voluntarily or involuntarily, in the process of encoding, storage and retrieval. This is defined as ‘suggestibility’\textsuperscript{15}. Reliability of the memory of a child who is vulnerable to suggestibility has been a challenge in gathering information in CSA investigations\textsuperscript{16}. Sometimes even the perpetrators can use suggestibility to distort the memory of the abusive event. This can happen at the initial time of encoding and storage of memory especially with a known abuser explaining the abusive act as a normal behaviour and ‘grooming’ the victim to willingly engage in the acts. Bruck & Ceci\textsuperscript{16} and Faller\textsuperscript{15} show that involuntary suggestibility can also result during the questioning process of an interview. Especially using close ended questions such as “*did he touch your buttocks?*” instead of “*where did he touch you?*” is an example of such influence, where the child may create a memory of the perpetrator touching the buttocks even though the child may not have any recollection of that exact action. Children who are repeatedly questioned this way may reach a point where they make up the story from all the peripheral information gathered through official and unofficial discussions. In a standard Sri Lankan setting, a child victim admitted to a hospital on suspicion of sexual abuse may be questioned multiple times starting from the police investigating team, the admissions counter of the hospital, the paediatric ward, forensic unit and any other unit that the child may be referred for further management. It is important to realize that at each of these points of contact, children are vulnerable to suggestibility. Healthcare personnel should refrain from conducting several interviews and maintain a system where only a single interview is held and details are shared between the different units managing the child. They should advise the other stakeholders, including family members and caregivers, not to discuss the incident with the victims and should likewise be conscious of their own verbal and non-verbal reactions when the victim is describing the alleged act\textsuperscript{17}.

**Language acquisition and memory**

Understanding the link among verbal ability development, memory and recall is also important. Obviously children up to about 3 years will find it very difficult to verbally narrate an event due to poor vocabulary. But it is also important to understand that, if the abusive event has occurred before language acquisition, the child might not have stored the memory in relation to words\textsuperscript{18}. In such instances retrieving the memory as a verbal narrative would be difficult for the child even after developing language fluency\textsuperscript{19}. In such instances, behaviour and expressions towards people and environment will link better with the memory\textsuperscript{20,21}. Therefore, it is vital that the interviewer considers not only the developmental stage of the child at the time of the interview, but also the development stage at the time of the abuse when constructing the interview.

**Obtaining a reliable testimony from the child**

Reviews of the historical context of common law in child sexual abuse show that courts have conventionally regarded children as being unable to distinguish between reality and fantasy\textsuperscript{22-24}. Faller shows how some investigators would regard an allegation with a sceptical stance rather than being neutral\textsuperscript{23}. The attitudes towards children have since changed and more emphasis is placed on the ability of the interviewer to motivate the child to distinguish between reality and fantasy. Experimental research shows that the mere understanding of the truth-lie concept does not guarantee that the child would narrate only the truth\textsuperscript{25}. It is nevertheless important for the interviewer to evaluate the child’s ability to distinguish between truths and untruths during the rapport building phase\textsuperscript{26}. It is interesting to note that children who have been made to promise to tell the truth during the interview have shown less tendency to lie or conceal a wrongdoing\textsuperscript{27,28}. Children should always be given the liberty to question the interviewer and clarify any doubts. Similarly, they should be reassured that saying they do not know the answer is acceptable. This gives them a higher chance to deal with reality rather than fantasy. Interviewers should not ask the child what they think would have happened because this
could lead to imaginative alterations of the testimony. Many features other than the interviewing style will determine the credibility of the memory retrieval by the child. Cronch, Viljoen & Hansen state that the interviewing environment, interviewer’s experience and gender are also important considerations. According to literature, open ended questioning with a properly built up rapport in a warm environment by a single experienced interviewer will bring out the best results. Audio recording the interviews will serve many purposes; most importantly to prevent multiple interviews. Interview protocols such as the NICHD Investigative Interview Protocol have been developed and follow up studies on the use of such protocols have shown that a well-trained interviewer with a knowledge of childhood memory development has a greater potential to obtain a reliable testimony from a child.

Conclusions
Memory can be altered or reconstructed unintentionally during the process of encoding, storage and retrieval through numerous processes. The influence of gist memory and suggestibility affecting the reliability of testimonies given by CSA victims have been extensively studied. Investigators should appreciate the fact that verbatim description of an incident may be limited even in older children, if the memory of the incident was stored before the child developed the capacity for language acquisition. Investigating cases of child sexual abuse, especially obtaining a reasonably accurate account of the abusive act(s) continues to be one of the most complex and difficult tasks encountered by medical, judicial and law enforcement professionals. Too often, courtroom decisions on CSA seem to have been influenced by prejudicial views on the narrative ability of the child victim as well as misperceptions on truth-telling behaviour among children and adolescents. It should be noted that there are many other factors such as social and cultural views on sexual behaviour, peer influences, perceptions on the forensic and judicial process that might also influence the child testimony which are not addressed here as they are beyond the scope of this article.

It is the responsibility of the authorities to duly consider the complexities of memory development when eliciting as well as interpreting testimonies from sexually abused children. Doing so is vital to ensure justice to the child victim as well as the accused.

Key Points
- Emotions, experiences and perceptions regarding the sexual act as well the perpetrator can influence memory during encoding, storage or recall.
- Gist memory may lead to false recollections of specific details such as time, place or clothing worn during the act.
- Even an older child may not be able to verbally describe an event if it had happened before the child developed language acquisition and the ability to store memory in relation to words.
- A child’s narrative of an event may be altered through the influence of suggestibility on memory.
- Suggestibility may even occur due to the verbal or non-verbal reactions of the interviewer, especially when the child is subjected to multiple interviews.
- A single, open-ended interview, conducted according to an established protocol after developing a good rapport with the child, shows the best outcome in CSA

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