

Contemporary Comment

iWitnessed: Capturing Contemporaneous Accounts to Enhance Witness Evidence

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Abstract

Eyewitness testimony can provide critical leads in all types of investigations and can be extremely persuasive in court. However, inconsistencies or inaccuracies in eyewitness accounts can undermine the perceived value of this evidence, leading to miscarriages of justice. Research shows that memory fades quickly after an event. Therefore, it is important for eyewitness accounts to be collected immediately after a critical incident. Unfortunately, it is often unfeasible for police to conduct in-depth interviews at the scene. This has led to the development of immediate recall tools that witnesses can use to record an initial account without the assistance of officers. Until now such recall tools have been limited by their inflexible paper-and-pencil format. To address this issue, a team of researchers in the fields of psychology and law have worked with the New South Wales Police Force to develop iWitnessed, an evidence-based mobile phone application. iWitnessed collects and preserves witness accounts, while providing the witnesses and victims with information about support services. Users can record information as text, images or audio recordings. This application is the first of its kind and represents a novel initiative to improve eyewitness memory evidence.

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Introduction

Eyewitness testimony can provide critical leads for police investigating an offence and can be extremely persuasive to triers of fact in court. However, limited police resources often restrict the ability of the police to interview witnesses for several days or even weeks after an incident has occurred. Moreover, witnesses are sometime unwilling to provide a statement about an event either because of fear or because they feel that the circumstances are not serious enough to report them to the police. In this comment we will discuss these delays and how they can negatively impact witness memory. We will then highlight advances that have been made in psychology to help preserve and protect witness accounts.

Background

In the aftermath of an incident, police resources are often stretched thin. The key priority for police officers is to identify and detain a suspect if present (pursuant to the *Law Enforcement (Powers and Responsibilities) Act 2002* (NSW)). They also have to attend to any injured victims and to secure the scene for investigation. There may be multiple witnesses present at the scene. Many of these witnesses will be lost to the subsequent investigation if they are not approached by officers immediately, or if the investigators do not discern how important they might be to the investigation. Some witnesses may have a limited command of English, and on-site translation services can be difficult and costly to obtain. All of this is problematic since any of these witnesses may hold potentially vital information about the event and/or perpetrators; information that will provide both critical leads for the investigation or crucial evidence in a trial. Limited police resources often restrict opportunities to thoroughly interview witnesses until several days or even weeks after the incident. Failing to identify informative witnesses or only becoming aware of the need to interview additional witnesses after a lengthy delay is likely to hamper the investigation.

Further challenges are that sometimes witnesses feel they are not ready to come forward immediately after an event, or that the circumstances at the time are not severe enough to report to the police (for example, in cases of domestic violence). This can cause problems when investigating or prosecuting cases. That is, victims and witnesses are often unable to recall specific details of each individual incident, making it difficult to establish the facts of the case. Additionally, studies show that when a witness appears confused or gives an inconsistent statement in court, the jury believes them to be less credible and accurate, which could reduce the likelihood of a successful conviction (Berman & Brian 1996; Bruer & Pozzulo 2014).

The psychology of eyewitness memory and the importance of immediate recall

Research on human memory confirms that forgetting occurs very rapidly and that memory is fallible (Schacter 2001). For example, witnesses can be influenced by post-event information (that is, information acquired after the critical incident). Research shows that when witnesses encounter misleading information after an event, they can incorporate it into their memory of the event (see Loftus 2005 for review). Witnesses may encounter such misinformation through leading questions, co-witness discussion or media reports (Wright & Davies 1999). With increased delay between the incident and formal interview, memories are

more easily contaminated by post-event information, presumably because the original memory becomes weaker (Loftus, Miller & Burns 1978; Mudd & Govern 2004; Paz-Alonso & Goodman 2008). Therefore, it is extremely important to preserve eyewitness memory in the immediate aftermath of an incident.

One way that eyewitness evidence can be preserved is through contemporaneous notes — records made at the time or very soon after the event. Police officers and legal practitioners around the world have begun to appreciate the value of such records. According to the *Evidence Act 1995* (NSW) ss 32 and 34, contemporaneous notes or other contemporaneous recordings of events can be used, with leave from the court, to prompt or support the memory of a witness. Indeed, the court may grant a witness permission to read from such notes during their testimony (*R v Qaumi (No 38)* [2016] NSWSC 743; *Abdollahi* [2013] NSWSC 480; *Cassar & Sleiman* [1999] NSWSC 651; *Yamine & Chami* [2002] NSWCCA 289). Consequently, contemporaneous notes can strengthen the accuracy and trustworthiness of the evidence in court, which is essential for fair outcomes.

Contemporaneous records come in all forms, ranging from a note scribbled on the back of a napkin to a meticulous description of the event. Naturally, detailed contemporaneous records are more beneficial for law enforcement when solving and prosecuting a case. Research has shown that jurors are distrustful of witnesses who add details to their account that they did not report initially, so it is very important to obtain contemporaneous accounts that are as detailed as possible (Oeberst 2012). The quest to obtain comprehensive contemporaneous notes from witnesses has led forensic psychologists to develop immediate recall tools. For example, in the United Kingdom ('UK'), the Self-Administered Interview (SAI©; Gabbert, Hope & Fisher 2009) was developed to formalise the process of eliciting an initial account from witnesses. The SAI© is a paper-and-pencil booklet that can be given to witnesses when police officers arrive at the scene. It contains a standardised protocol of clear instructions and questions that witnesses can complete individually, without the guidance of an officer. When completing the SAI© the witness is cued to record details about the location of the incident, the sequence of events, and the people involved.

The SAI© is based on empirical memory research. That is, it draws on memory mnemonics from the Cognitive Interview ('CI') (Fisher & Geiselman 1992), including instructions to mentally reinstate the context of the witnessed event and to report everything. The CI has been shown to elicit significantly more accurate and detailed information than a free-recall request (see Fisher & Schreiber 2007; Wells, Memon & Penrod 2006 for reviews). Like the CI, research has shown that the SAI© preserves the accuracy and completeness of memory over time (Gabbert, Hope & Fisher 2009; Gittins, Paterson & Sharpe 2015; McPhee, Paterson & Kemp 2014). Furthermore, it can also protect against memory contamination from post-event information (Gabbert et al. 2012; McPhee, Paterson & Kemp 2014). However, timing is critical: the benefits of the SAI© depend on it being delivered within 24 hours of the incident (Paterson, Eijkemans & Kemp 2015).

The effects of completing the SAI© in a non-native language have also been studied. Approximately 22 per cent of the Australian population speak a language other than English at home (Australian Bureau of Statistics 2016). Language barriers, therefore, represent a likely practical obstacle to obtaining a coherent and accurate eyewitness account of an incident. On-site translation services can be difficult and costly to obtain. Kemp & Chew 2012 showed that completing the SAI© in a second language eliminates the benefits for memory usually seen when completing the tool. This result suggests a better approach would be to allow witnesses to record their observations in their preferred language.

Field-based research within a UK police force has indicated that all officers working with the tool found the SAI© to be useful, and that 88 per cent believed conducting an SAI© during the investigation saved time (Hope, Gabbert & Fisher 2011, p. 221). Further, officers reported that the SAI© could be used to elicit a detailed account from witnesses before they had forgotten important details. Other benefits identified included the opportunity to obtain an immediate account from multiple witnesses and identify key witnesses efficiently while saving time and resources (Hope et al. 2011). This suggests that immediate recall tools not only serve to preserve and protect memory, but also enable officers to prioritise the allocation of policing resources during the critical early stages of an investigation.

Limitations of the SAI©

Despite these promising research findings, the SAI© has several limitations. First, the paper format means that the tool is generic and inflexible. That is, the tool is only appropriate for one-off events that are attended by the police, and not incidents where no police officers are present and/or that are repeated or ongoing, such as domestic violence. Second, the tool does not accommodate the needs of different types of witnesses (for example, those with lower literacy who do not feel comfortable with the written format of the tool or those who do not speak English). Our laboratory research shows that witnesses prefer to give spoken rather than written responses when using an immediate recall tool, and that spoken responses are as accurate at preserving memory (McPhee, Paterson & Kemp 2014).

The solution: iWitnessed

In response to these limitations, we have worked closely with the New South Wales ('NSW') Police Force to improve several aspects of the SAI© and develop a more contemporary practical tool. Consequently, we have developed iWitnessed, a smartphone application that is designed to collect and preserve contemporaneous eyewitness accounts. Using our collective expertise in empirical memory research, policing practices, legislation and admissibility of evidence, we developed an application that will facilitate police investigations and prosecutions, and also have application more generally. This project places Australia at the forefront of international initiatives to improve the collection of eyewitness evidence and will help in the investigation and prosecution of incidents across the country. iWitnessed is available for free and can be downloaded from both Apple and Android App stores. This means that anyone with access to a smartphone or tablet can download the application.

There are several noteworthy benefits of iWitnessed. First, it will help witnesses and/or victims record details of the event using a guided recall procedure that has been designed to enhance witness recall using our expertise in witness memory. Second, since it is easy and free to download, a police officer does not even need to be present for witnesses to start using the tool. Third, iWitnessed can be used either by victims of one-off events or those of repeated crimes to store details of each specific incident. Incidents such as bullying, domestic violence, and sexual abuse are often ongoing and distressing for the witnesses or victims involved. For successful prosecution, details such as dates, times and specific aspects of every individual incident are required. However, witnesses frequently have trouble recalling such details because they typically confuse the incidents with one another. For example, research with adults indicates that when repeated events follow a similar 'script', individuals are incapable of remembering specific details of each event (see Hudson & Nelson 1986 for review). iWitnessed overcomes this issue by providing a witness or victim with the opportunity to

update and save details of each individual event. Each entry will be 'stamped' with information on date, time and location, where user preference and internet access allows. Hence, using this application witnesses can keep a record of events until they feel they are ready, or that the circumstances have become serious enough, to report them to the police.

A further advantage of iWitnessed is its flexibility, which allows it to cater to the needs of a wide range of different witnesses. For instance, although the questions on the app are currently only available in English, users are able to record their answers in their native language. Furthermore, iWitnessed allows users to update and save details of witnessed events as text, images, screenshots or audio recordings. Alternatively, users can employ speech-to-text functions available on smartphones. Therefore, the application can record both written and oral accounts, with the latter shown to be more user-friendly (McPhee, Paterson & Kemp 2014). Some civilian witnesses may not have high literacy skills and therefore may struggle with reading or writing. If required to write about the incident, such witnesses may provide an incomplete account. In these cases, providing witnesses with an oral version of the tool might increase testimony accuracy and completeness.

Due to the sensitive information that will be recorded using iWitnessed, the application was created with built-in security features. For example, iWitnessed entries can be protected with a PIN. If the user enters an incorrect PIN code, they will still be able to access iWitnessed, however they will not be able to see any of the information entered under the old PIN code. The information collected by the app will be stored on the phone and can be emailed in PDF format should the witness choose to report the incident to police, or decide to back up the information on a secure email account.

It is anticipated that iWitnessed will be used to record events that are likely to be stressful or traumatic in nature. Individuals who witness such events are at risk of developing post-traumatic stress disorder ('PTSD'). Early detection of post-traumatic symptomatology and access to support networks can be extremely beneficial in helping victims recover from the trauma (Bryant 2003). The iWitnessed application helps with this by providing users with direct links to support services and information about the psychological effects of trauma. Moreover, it is possible that simply using the application as a structured recall tool may be beneficial for a witness's psychological wellbeing. According to cognitive theories of PTSD, if a traumatic event is not properly processed, then the memory is vulnerable to being triggered by sensory stimuli (Ehlers & Clark 2000; Foa, Steketee & Rothbaum 1989). As a result, the witness is more likely to experience PTSD symptoms such as anxiety and intrusive memories of the event (Ehlers & Clark 2000). Therefore, it is important for the traumatic event to be processed and integrated into pre-existing memory frameworks in order for psychological wellbeing to be restored. It is conceivable that the use of recall tools such as iWitnessed could help with this process, but further research is required to confirm this.

iWitnessed is, to our knowledge, the first attempt in the world to create an electronic immediate recall tool. There are many advantages of iWitnessed as highlighted above, and the development of our tool could not have come at a better time. Citizens are using advanced technologies on a daily basis; indeed the vast majority (84%) of Australians own a smartphone (Deloitte 2016). This statistic explains why more and more people are recording incidents they witness, such as racist attacks on public transport (Aubusson 2015). In addition, recently there has been a dramatic increase in the use of new technologies by Australian police forces to facilitate police procedures and investigative processes. For example, in 2015, 500 police officers in NSW were issued with smartphones so that they could access police databases to conduct background checks (Francis 2015). Moreover, in 2014, the *NSW Criminal Procedure Act 1986* (NSW) was amended to allow audio and video recordings, known as Domestic

Violence Evidence in Chief ('DVEC'), to be used as evidence in domestic violence cases (see Ch 6 Pt 4B of that Act). Since the introduction of this evidence, NSW Police have reported an increase in successful prosecutions within domestic violence cases (Harris 2016); however, other research has shown that it has had little impact on guilty pleas or conviction rates in NSW (Yeong & Poynton 2017). These changes do not only affect officers; civilians are now being asked to report minor traffic accidents online instead of calling the police (Partridge 2014). iWitnessed complements these developments and the movement from the Australian police forces to use modern technologies in their everyday practices. Our immediate recall tool has the potential to revolutionise the way that memory evidence is collected.

While the use of mobile phones to record criminal incidents is rising, legislation on how to use this evidence is lagging behind. There is some legislation on the admissibility of this type of evidence in court (for example, *Surveillance Devices Act 2007* (NSW) s 7 and *Evidence Act 1995* (NSW) s 138), but it has not kept pace with the rapid development of modern technologies and thus the evidence often may be used only upon strict proof in individual cases (*Huffman & Gorman* [2014] FamCa 1077; *Janssen & Janssen* [2016] FamCa 345). This can cause delays and/or complications in prosecution. With the development of iWitnessed, important steps can be taken in developing suitable legislation on the use of evidence recorded on mobile phones within the Australian legal system.

Possible future directions

Now that iWitnessed is publicly available it is important that we continue to test and further enhance the app. We aim to evaluate the app in terms of: usability (for both police officers and witnesses/victims); memory enhancement; and psychological effects. We would also like to make the app available in several languages. Although iWitnessed can be answered in different languages, the questions are currently only available in English.

Conclusion

iWitnessed is a new immediate recall tool that is based on empirical research. It will facilitate police practices by helping them prioritise the allocation of resources during the critical early stages of an investigation. Furthermore, the app is designed to preserve and protect memories of those who have witnessed an incident, providing police officers and prosecutors with access to accurate information regarding critical incidents. Ultimately, it is expected that the information gathered by this tool will facilitate police practice and investigation as well as litigation in both criminal and civil trials.

Cases

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