Do Eyewitnesses Remember what they Witnessed? An Evaluation of the Reliability of Eyewitness Testimony

Małgorzata Oliwa[1]

SWPS University of Social Sciences and Humanities, Poland

Abstract

The Criminal Justice System heavily relies on eyewitness testimony (EWT) during legal proceedings because many crime scenes are lacking DNA traces. However, human memory is susceptible to errors, biases, and forgetting, which also make it easy to imply false memories. A lack of knowledge regarding what can influence witness memory might result in wrongful convictions and even the death penalty. The aim of this article was to critically evaluate the reliability of EWT by referencing empirical research regarding system and estimator variables, such as; trauma, weapon focus effect, intelligence, alcohol, age, and post-event information. The results of some studies have shown that under certain circumstances, the effects of some of the variables have not been observed. On the other hand, there is strong evidence that the testimony of elderly witnesses does not make a reliable form of evidence. The same applies to alcohol intoxication and its negative impact on memory. The conclusion emphasizes the importance of knowledge about what affects witness testimony in the legal system. It states that even if some results claim that no negative effects were found, the CJS should not be completely certain about eyewitnesses' testimonies. In addition, besides the context of the witnesses, the essay highlights how unreliable our memory can be.

Keywords: *Eyewitness testimony (EWT); Memory; Elderly witnesses; Weapon Focus Effect (WFE).*

[1]Publication based upon written work the author developed during their Master's degree (MA) in Psychology at SWPS University of Social Sciences and Humanities, Poland in 2026.

Introduction

If you happen to witness a crime, would you be able to accurately recall what you saw? This is a role that an eyewitness plays, often days or even weeks after the crime occurred (Gabbert et al., 2012). Eyewitnesses play a significant part in solving crimes. They provide leads that help police investigators move the case forward, but also the evidence that can be used to convict the offenders (Wells & Olson, 2003). Eyewitnesses identify a criminal and also testify (EWT) about other relevant aspects of a crime event (Wells, 1985). Witnesses memory often is the only evidence during legal proceedings because many crime scenes are lacking DNA traces (Howe & Knott, 2015). However, as humans, we are prone to errors. The tendency to inaccurately recall the observed situation is a characteristic trait of a typical and properly functioning cognitive system (Jakubowska, 2016; Willmott & Sherretts, 2016). Simon and Chabris (2011), in their study on people's beliefs about how memory works, reported that 63% of participants agreed that human memory works like a video camera. This assumes that memory is a passive process that accurately records everything we observe. This statement is inaccurate. Our memory is a reconstruction of past experiences (Johson & Rye, 1998) and is susceptible to contamination, biases, and forgetting (Howe & Knott, 2005; Loftus, 2005). This can lead to false memories. False memories involve people remembering events that never happened, or remembering them differently from what actually occurred (Roedigger & McDermott, 1995). People can have false memories of traumatic and stressful experiences, unlikely events like being abducted by UFO, and strange actions through imagination (Porter et al., 1999; Loftus, 1997; Otgaar et al., 2009; Thomas & Loftus, 2002). Despite the evidence surrounding the topic of memory, people involved in the legal system share opposite beliefs regarding eyewitness accuracy (Benton et al., 2005; Magnusen et al., 2010; Wise & Safer, 2004; Sumampouw et al., 2021). This might lead to false accusations and, as a last resort, to death penalty (Gross et al., 2014). There are also factors influencing eyewitnesses accuracy,

such as estimator and system variables (Wells, 1978). In this essay, I will critically evaluate the statement that eyewitness testimony is a reliable form of evidence. My aim is to focus on said estimator and system variables regarding eyewitness testimony, simultaneously providing empirical research that contradicts or supports this thesis.

Two types of variables can influence the accuracy of eyewitness testimony (EWT): estimator and system variables. Estimator variables are not controlled by the Criminal Justice System and in actual crime cases, although they can be manipulated in research. Estimator variables include characteristics of an eyewitness, for example, stress, intoxication, or age. Even though they cannot be controlled, the CJS's knowledge about those factors can help estimate the reliability of a witness's testimony. On the other hand, system variables can be controlled by CJS. They concern, for instance: previously said, delay between the crime event and witness testimony, which may negatively affect the memories; or the way the lineup is conducted when the investigator knows who the suspect is (Wells, 1978). In this essay, I will focus on those that are affecting eyewitness testimony, such as; trauma, weapon focus effect, intelligence, alcohol, age, and post-event information.

Empirical Research: Impact of Estimator & System Variables

Psychological trauma is a response to being exposed to an event involving injury, threats, or death. It's an affective/cognitive experience (Boduszek et al., 2017), that is subjective and based on person's reaction to the situation (Peace & Porter, 2004; Dlamini et al., 2017). Trauma is related to individual's distress and stress reaction (Hardy et al., 2009; Wang et al., 2023). Many eyewitness and fundamental memory researchers have studied how acute stress may impact memory performance (Marr et al., 2021). The results are inconsistent, showing that

stress can negatively affect or enhance memory encoding (Morgan et al., 2004; Joels et al., 2006; Shield et al., 2017). On the other hand, trauma leads to a disruption of cognitive processing at the stage of memory formation and recollection. Peri-traumatic dissociation, distress, and physiological reactivity that individuals experience during a traumatic event alter the encoding of a memory (Hardy et al., 2009). Research conducted by Hardy et al. (2009) and Booth et al. (2018) has shown that people who dissociated while being sexually assaulted reported more fragmented traumatic memory during a police investigation. Springle, Dreier and Goldwasser (2023) consider what they call the Traumatic Untrustworthiness Argument (TUA). According to the TUA, we should be skeptical about victims' testimony because they are susceptible to misremembering traumatic events. However, research studies cited by the authors (Samuelson, 2001; Stevens et al., 2018; Haskell & Randall, 2019; Richardson et al., 2025) do not support this argument. The hippocampus and the amygdala are both involved in memory processes. The hippocampus among other things, is responsible for coherent memory structure, by putting remembered events into a chronological order; and it works slowly while consolidating memories. On the other hand, the amygdala works fast and is responsible for instant reactions to danger. A higher level of cortisol during a traumatic experience is associated with higher activation of the amygdala and poorer performance of the hippocampus. That explains why very often victims are not able to recall what happened shortly after a traumatic event. However, a few days later, the hippocampus is able to complete encoding, and the traumatic memory becomes more accessible. Moreover, stress might enhance memory, resulting in having vivid memories of what happened at the beginning of a traumatic event. Additionally, we tend to remember things on which we focus our attention. As in previous research, victims often cope with traumatic events by dissociating during them; this explains why they remember beginning better than what happened in the middle and why those memories are fragmented (Booth et al., 2017; Curley et al., 2026). Even though this concerns

victims, not eyewitness, people who experienced danger firsthand still have to be investigated and are expected to provide accurate statements (Kelly et al., 2005). They still can be trustworthy, and a lot depends on how they are investigated.

Weapon focus occurs when an eyewitness focuses on an offender's weapon during the course of a crime. The effect suggests that the weapon will draw witness attention, decreasing his ability to accurately encode and recall peripheral details of the crime (Steblay, 1992). A large body of research studies have been done in this area. Stebley (1992) conducted a meta-analysis on the weapon focus effect. He examined 10 datasets that included the accuracy of describing the characteristics of the offender after the weapon-present or weapon-absent conditions. The answers on the perpetrator's characteristics were more exact in weapon-absent condition. Similar result was found in study done by Loftus and Messo (1987). Participants in weapon condition were less accurate in their testimonies. These findings have suggested that the presence of a weapon during a crime can negatively influence the accuracy of EWT. In addition, Hope and Wright (2006) conducted an experiment where they were trying to find out if weapon effect could be explained by the unusual stimulus. Participants were assigned to the three conditions: weapon, unusual and control. They viewed a slideshow of a target entering a grocery store and then pulling an object out of his pocket: a gun (weapon condition), a feather duster (unusual condition) and a wallet (control condition). Then participants completed a memory task. The results have shown that those who witnessed a slideshow with a gun provided a more detailed description of an object, though they scored lower on questions about the target's appearance, than subjects in two other groups. Moreover, Pickel et al. (2008) presented a study where, in a first experiment, participants were watching a video of an individual holding a gun on a baseball field or shooting range. Subjects who saw the target carrying a weapon on a baseball field provided less accurate descriptions of said individual. In

the second experiment, a person with a gun was dressed as a Catholic priest or police officer. A weapon focus effect occurred when a weapon was carried by a priest but not by an officer. Those results have emphasized the role of a context and the unusuality of a weapon. If it appeared in a consistent context and was carried by a target associated with it, then the effect was not found. However, it's interesting if there are any cultural differences. Unfortunately, I haven't found a cross-cultural study, comparing, for example, participants from the USA vs. Poland. Although, the results of a study conducted by Pickle and Sneyd (2016), on the weapon focus effect on memory for black versus white offenders have shown that subjects were more accurate while recalling black perpetrator's appearance than white. These findings supported the hypothesis of the strong stereotype, associating a black person with crime. There are other factors that can disrupt the effect, like offender's distinctive facial feature (Carlson & Carlson, 2012). Also, it's considered that too short or too long exposure time to a weapon can reduce the effect (Fawcett et al., 2013). As presented, weapon focus effect negatively affect memory, but it's dependent on many factors (Willmott, 2017).

Little research studies have been done on the relationship between the level of intelligence and EWT. A study by Roebers and Schneider (2001) was exploring the influence of fluid intelligence on children's recall. Kids (6, 8, and 10 years old) watched a video showing a fight. After that, each subject completed an intelligence test and then was asked to give a free recall of the previously watched video. The procedure of free recalling was repeated. In addition, each kid was assigned to one of two cued recall conditions, one with an unbiased question and two with a misleading question. After one week, they were asked again to free recall the video that they watched a month ago. The results on intelligence have shown that IQ has a significant effect on the accuracy of free recall for 10-year-olds and on the accuracy of the cued recall in the group of 8-year-olds. In addition, kids with high intelligence scored higher

on free recall than children with lower IQ, but only when large differences were considered. Lastly, no difference between high and low IQs was found in suggestibility. It can be assumed that high fluid intelligence in kids is linked to better recall. However, the understanding of what's actually intelligence is not consistent (Strelau, 1987). A study by Chae and Ceci (2005) on children's recall took into consideration verbal and non-verbal IQ. The results have shown that kids with higher verbal intelligence were better at recalling information spontaneously than those with lower verbal intelligence. Although, younger participants with high verbal intelligence were more prone to suggestions than older children, which is contradictory with the findings from previous research. People with intellectual disability (ID) are in particular likely to become victims of a crime and eyewitnesses (Ternes & Yuille, 2008). Research done by Ternes and Yuille (2008) has shown that individuals with IDs might recall less information about the event than the comparison group. However, there were no differences between the two groups in accuracy for details and in answering close-ended questions, which means that the testimony of people with IDs can still be a valuable source of information.

Many crimes take place when alcohol is involved (Willmott, 2016). Alcohol consumption negatively influences memory performance, and it's believed in the legal system that intoxication clouds eyewitness testimony (Jores et al, 2018). Jores et al. (2018) presented a meta-analysis of the effects of acute alcohol intoxication on witness recall. They compared the number of correct and incorrect details reported depending on acute alcohol consumption, investigated how level of intoxication and alcohol use prior to encoding will affect witness recall. Researchers also analysed the effect of alcohol on recall of central and peripheral details, the difference between cued and free recall, and they compared the testimony of witnesses while still intoxicated to later statements. The results have shown that acute alcohol intoxication prior to encoding impaired the number of accurate details but did not increase the

number of incorrect answers. High intoxication had a large and significant effect on the accuracy of recalled details, while a mild level of alcohol consumption had small effect, but also statistically significant. Also, there was a small effect that suggested that alcohol consumption can reduce the accuracy of peripheral details recall. Moreover, alcohol intoxication impaired memory during an immediate recall, but also when subject was sober; as well as during free recall. In addition, the results of an experiment conducted by Hogsand et al. (2013) have also shown that witnesses in a higher alcohol dose group recalled less information. Although there were no differences between low alcohol dose group and participants in control condition in memory performance, which is contradictory with the findings of the presented above mata-analysis. Furthermore, according to the review of alcohol and other drugs on false memories presented by Kloft et al. (2023), alcohol might increase vulnerability to false memories. To sum up, the research results are consistent regarding the negative impact of substance use on witnesses' memory.

Ageing is associated with changes in cognitive functioning. Elderly individuals experience a decrease in information processing, working and long-term memory (Park & Reuter-Lorenz, 2009). Research has shown that older people face difficulties in correctly identifying the origin of a memory (Lindsay & Allen, 2004). Furthermore, they are more prone to recall errors and slips (Koriat et al., 1998). In highly developed countries, society is ageing. Along with an increase of the elderly population, their quality of life improves, leading to an increasing in their activity, which also results in a heightened appearance of elderly people in criminal proceedings (Biederman-Zaręba, 2011). Looking at the foregoing research findings regarding changes in cognitive processes in the elderly, one might think that they are less likely to provide accurate eyewitness testimony. Panksy et al. (2009) conducted a study in which they examined age-related differences in memory accuracy. Participants watched a slideshow and then, in the

first part, they filled out a recognition questionnaire assessing their memory performance. In the second part, they went over the answers they had provided in the previous part. Older subjects also completed two tests of executive functions. The results have shown that the memory quantity of older adults (>60) memory were poorer and less accurate compared to younger participants. These findings were also confirmed in research done by Parrish (2021). The results have shown a significant and negative, although weak, correlation between age and accuracy of testimony. Still, this suggests that, along with age, memory accuracy is decreasing. Also, similar results were found in a study conducted by Brimacombe et al. (2003). Older seniors were less accurate in their testimony than younger subjects. These findings support previous considerations that elderly testimony does not make an accurate source of information (Ryan et al., 2017).

Eyewitness testimony is often delayed. During this time of waiting, they are exposed on addition new or misleading information about the crime event from various external sources, which is called post-event information (PEI) (Gabbert et al., 2012). Studies have shown that the introduction of misleading post-event information will negatively affect the witness's memory and that they will include the misinformation in their statements (Belli, 1989; Loftus, 1992; Wells & Loftus, 2003). Although research studies have also shown that eyewitnesses are more susceptible to misinformation regarding peripheral details of a crime event than central ones (Paz-Alonson et al., 2013; Sutherland & Hayne, 2001). Literature presents different types of post-event information, such as police interviews, media reports, and co-witnesses. For instance, a study by Luke, Crozier and Strange (2017) has shown that bait questions asked by investigators were affecting eyewitnesses' memory. Participants, after being mislead, provided less accurate statements and also believed that evidence proposed in a bait question existed. A study by Zargoza et al. (2001) also confirmed that subjects were prone to accepting

misinformation that was presented in the interview. A study by Peterson and Kemp (2006) examined how the type o PEI (leading question, media report, co-witness discussion) influences the accuracy of subjects' memory. The results have shown that participants in misleading PEI were less accurate in their statements than the control group. Moreover, co-witness discussion had the strongest influence on eyewitness memory, both for correct and misleading PEI. This was also confirmed in research done by Goodwin et al. (2017). Here, the results have shown that participants who co-discussed a previously observed event with a highly confident co-witness, recalled information consistent with the CW's report, also both for correct and incorrect reports. The results have suggested how powerful co-witness discussion can be. During the crime event, each eyewitness will focus his attention on something different. Taking into consideration that CW discussion has an influence on witnesses' testimony also for correct details, it might be actually helpful and allow for a more complete statement. But it's worth noting, that presented research studies had been done in controlled conditions.

Conclusion

Here I have provided research studies regarding the accuracy of eyewitness testimony. To sum up, lots of empirical research contradicts the thesis that eyewitness testimony is a reliable form of evidence. There is hard evidence regarding the accuracy of EWT of elderly witnesses and clear agreement, backed up by research, that alcohol intoxication has a negative impact on memory performance. Although, research studies have shown that under certain circumstances and depending on many factors, the effects of some of the variables have not been observed, it is still risky to claim that eyewitnesses can be fully reliable. Knowledge about what is influencing eyewitness statements is incredibly important in the legal system and might help to increase the effectiveness of investigations. Furthermore, cited research studies have shown how unreliable human memory can be. As important as this is in the context of legal

proceedings and witnesses, it's also worth remembering in everyday life to be more open-minded, look at situations from different perspectives, and remain humble

References

Belli, R. F. (1989). Influences of misleading postevent information: Misinformation interference and acceptance. Journal of Experimental Psychology: General, 118(1), 72–85. https://doi.org/10.1037/0096-3445.118.1.72

Benton, T. R., Ross, D. F., Bradshaw, E., Thomas, W. N., & Bradshaw, G. S. (2006). Eyewitness memory is still not common sense: Comparing jurors, judges and law enforcement to eyewitness experts. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *20*(1), 115-129. https://doi.org/10.1002/acp.1171

Biederman-Zaręba, A. (2011). Wywiad poznawczy a przesłuchanie świadka w podeszłym wieku.

Brimacombe, C. E., Jung, S., Garrioch, L., & Allison, M. (2003). Perceptions of older adult eyewitnesses: Will you believe me when I'm 64?. *Law and Human Behavior*, *27*(5), 507-522.

Booth, N., Willmott, D. & Boduszek, D. (2017). Juries in Rape Trials: Balanced or Biased? *Criminal Law and Justice Weekly, 181*, 662-663.

Booth, N., Willmott, D. & Boduszek, D. (2018). Rape Myths and Misconceptions. *The Law Society Gazette.*

Boduszek, D., Debowska, A. and Willmott, D. (2017). A New Model of Psychopathy. The *Custodial Review, 81,* 16-17.

Carlson, C. A., & Carlson, M. A. (2012). A distinctiveness-driven reversal of the\ weapon-focus effect. *Applied Psychology in Criminal Justice*, *8*(1).

Chae, Y., & Ceci, S. J. (2005). Individual differences in children's recall and suggestibility: The effect of intelligence, temperament, and self-perceptions. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and*

Chambers, K. L., & Zaragoza, M. S. (2001). Intended and unintended effects of explicit warnings on eyewitness suggestibility: Evidence from source identification tests. *Memory & Cognition*, *29*(8), 1120-1129.

Curley, L., Willmott, D., & Widanaralalage, B. K. (2026). How Male Rape Myths Stop Some Victims of Sexual Assault from Getting Justice – New Study. *The Conversation.* https://doi.org/10.64628/AB.fe6phtcm3

Daniel Y, A., & Kent, J. (1980). Eyewitness identification by elderly and young adults. *Law and Human Behavior*, *4*(4), 359-371.

Cognition, *19*(4), 383-407.https://doi.org/10.1002/acp.1094

Deffenbacher, K. A., Bornstein, B. H., Penrod, S. D., & McGorty, E. K. (2004). A meta-analytic review of the effects of high stress on eyewitness memory. *Law and human behavior*, *28*(6), 687-706.

Dlamini, T., Willmott, D., & Ryan, S. (2017). The Basis and Structure of Attitudes: A Critical Evaluation of Experimental, Discursive, and Social Constructionist Psychological Perspectives. *Psychology and Behavioral Science,* *6*(1), 1-6. DOI: 10.19080/PBSIJ.2017.06.555680

Fawcett, J. M., Russell, E. J., Peace, K. A., & Christie, J. (2013). Of guns and geese: A meta-analytic review of the 'weapon focus' literature. *Psychology, Crime & Law*, *19*(1), 35-66. https://doi.org/10.1080/1068316X.2011.599325

Fawcett, J. M., Peace, K. A., & Greve, A. (2016). Looking down the barrel of a gun: What do we know about the weapon focus effect?. *Journal of Applied Research in Memory and Cognition*, *5*(3), 257-263.https://doi.org/10.1016/j.jarmac.2016.07.005

Gabbert, F., Hope, L., Fisher, R. P., & Jamieson, K. (2012). Protecting against misleading post-event information with a self-administered interview. *Applied Cognitive Psychology*, *26*(4), 568-575. https://doi.org/10.1002/acp.2828

Goodwin, K. A., Hannah, P. J., Nicholl, M. C., & Ferri, J. M. (2017). The confident co-witness: The effects of misinformation on memory after collaborative discussion. *Applied Cognitive Psychology*, *31*(2), 225-235.https://doi.org/10.1002/acp.3320

Gross, S. R., O'brien, B., Hu, C., & Kennedy, E. H. (2014). Rate of false conviction of criminal defendants who are sentenced to death. *Proceedings of the National| Academy of Sciences*, *111*(20), 7230-7235. https://doi.org/10.1073/pnas.1306417111

Hagsand, A., Hjelmsäter, E. R. A., Granhag, P. A., Fahlke, C., & Söderpalm-Gordh, A. (2013). Bottled memories: On how alcohol affects eyewitness recall. *Scandinavian Journal of Psychology*, *54*(3), 188-195. https://doi.org/10.1111/sjop.12035

Hardy, A., Young, K., & Holmes, E. A. (2009). Does trauma memory play a role in the experience of reporting sexual assault during police interviews? An exploratory study. *Memory*, *17*(8), 783-788. https://doi.org/10.1080/09658210903081835

Haskell, L., & Randall, M. (2019). Impact of trauma on adult sexual assault victims: What the criminal justice system needs to know. https://dx.doi.org/10.2139/ssrn.3417763

Hope, L., & Wright, D. (2007). Beyond unusual? Examining the role of attention in the\ weapon focus effect. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *21*(7), 951-961. https://doi.org/10.1002/acp.1307

Howe, M. L., & Knott, L. M. (2015). The fallibility of memory in judicial processes: Lessons from the past and their modern consequences. *Memory*, *23*(5), 633-656. https://doi.org/10.1080/09658211.2015.1010709

Jakubowska, K. (2016). Błędne zeznania świadków naocznych i nausznych jako efekt działania standardowych mechanizmów poznawczych. *Studia z kognitywistyki filozofii umysłu*, *9*(1), 5-22.

Joëls, M., Pu, Z., Wiegert, O., Oitzl, M. S., & Krugers, H. J. (2006). Learning under stress: how does it work?. *Trends in cognitive sciences*, *10*(4), 152-158.

Johnson, M. K., & Raye, C. L. (1998). False memories and confabulation. *Trends in cognitive sciences*, *2*(4), 137-145. https://doi.org/10.1016/s1364-6613(98)01152-8

Jores, T., Colloff, M. F., Kloft, L., Smailes, H., & Flowe, H. D. (2019). A meta-analysis of the effects of acute alcohol intoxication on witness recall. *Applied cognitive psychology*, *33*(3), 334-343. https://doi.org/10.1002/acp.3533

Kelly, L., Lovett, J., & Regan, L. (2005). A gap or a chasm. *Attrition in reported rape cases*, *293*.

Kloft, L., Otgaar, H., Blokland, A., van Oorsouw, K., Schepers, J., Steinmeyer, S., & Ramaekers, J. G. (2023). False memories in the field: Impact of substance intoxication and sleep restriction on false memory formation. *Journal of Applied Research in Memory and Cognition*, *12*(3), 389. https://psycnet.apa.org/doi/10.1037/mac0000055

Koriat, A., Ben-Zur, H., & Sheffer, D. (1988). Telling the same story twice: Output monitoring and age. *Journal of Memory and Language*, *27*(1), 23-39. https://doi.org/10.1016/0749-596X(88)90046-0

Lindsay, D. S., Allen, B. P., Chan, J. C., & Dahl, L. C. (2004). Eyewitness suggestibility and source similarity: Intrusions of details from one event into memory reports of another event. *Journal of Memory and Language*, *50*(1), 96-111. https://doi.org/10.1016/j.jml.2003.08.007

Loftus, E. F., Loftus, G. R., & Messo, J. (1987). Some facts about "weapon focus". *Law and human behavior*, *11*(1), 55-62.

Loftus, E. F. (1992). When a lie becomes memory's truth: Memory distortion after exposure to misinformation. *Current directions in psychological science*, *1*(4), 121-123

Loftus, E. F. (1997). Creating false memories. *Scientific American*, *277*(3), 70-75.

Loftus, E. F. (2005). Planting misinformation in the human mind: A 30-year investigation of the malleability of memory. *Learning & memory*, *12*(4), 361-366.

Luke, T. J., Crozier, W. E., & Strange, D. (2017). Memory errors in police interviews: The bait question as a source of misinformation. *Journal of Applied Research in Memory and Cognition*, *6*(3), 260-273.

Magnussen, S., Melinder, A., Stridbeck, U., & Raja, A. Q. (2010). Beliefs about factors affecting the reliability of eyewitness testimony: A comparison of judges, jurors and the general public. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *24*(1), 122-133. https://doi.org/10.1002/acp.1550

Marr, C., Sauerland, M., Otgaar, H., Quaedflieg, C. W., & Hope, L. (2021). The effects of acute stress on eyewitness memory: An integrative review for eyewitness researchers. *Memory*, *29*(8), 1091-1100. https://doi.org/10.1080/09658211.2021.1955935

Morgan III, C. A., Hazlett, G., Doran, A., Garrett, S., Hoyt, G., Thomas, P., Baranoski, M., & Southwick, S. M. (2004). Accuracy of eyewitness memory for persons encountered during exposure to highly intense stress. *International journal of law and psychiatry*, *27*(3), 265-279.https://doi.org/10.1016/j.ijlp.2004.03.004

Otgaar, H., Candel, I., Merckelbach, H., & Wade, K. A. (2009). Abducted by a UFO: Prevalence information affects young children's false memories for an implausible

event. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *23*(1), 115-125. https://doi.org/10.1002/acp.1445

Pansky, A., Goldsmith, M., Koriat, A., & Pearlman-Avnion, S. (2009). Memory accuracy in old age: Cognitive, metacognitive, and neurocognitive determinants. *European Journal of Cognitive Psychology*, *21*(2-3), 303-329. https://doi.org/10.1080/09541440802281183

Park, D. C., & Reuter-Lorenz, P. (2009). The adaptive brain: aging and neurocognitive scaffolding. *Annual review of psychology*, *60*(1), 173-196.

Parrish, E. (2021). *The Impact of Individual Differences on Accuracy, Confidence, and Punitive Judgements for Eyewitness Testimony of Domestic Violence* (Doctoral dissertation, University of Huddersfield).

Paz-Alonso, P. M., Goodman, G. S., & Ibabe, I. (2013). Adult eyewitness memory and compliance: Effects of post-event misinformation on memory for a negative event. *Behavioral sciences & the law*, *31*(5), 541-558.

Peace, K. A., & Porter, S. (2004). A longitudinal investigation of the reliability of memories for trauma and other emotional experiences. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *18*(9), 1143-1159. https://doi.org/10.1002/acp.1046

Paterson, H. M., & Kemp, R. I. (2006). Comparing methods of encountering post-event information: The power of co-witness suggestion. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *20*(8), 1083-1099.https://doi.org/10.1002/acp.1261

Pickel, K. L., Narter, D. B., Jameson, M. M., & Lenhardt, T. T. (2008). The weapon focus effect in child eyewitnesses. *Psychology, Crime & Law*, *14*(1), 61-72. https://doi.org/10.1080/10683160701391307

Pickel, K. L., & Sneyd, D. E. (2018). The weapon focus effect is weaker with Black versus White male perpetrators. *Memory*, *26*(1), 29-41. https://doi.org/10.1080/09658211.2017.1317814

Porter, S., Yuille, J. C., & Lehman, D. R. (1999). The nature of real, implanted, and fabricated memories for emotional childhood events: Implications for the recovered memory debate. *Law and human behavior*, *23*(5), 517-537.

Richardson, E., Jenkins, L. & Willmott, D. (2023). Rape Myths, Jury Deliberations, and Conversation Analysis: A New Approach to an age-old Problem. *Emerald Opinion & Blog.* Available at https://www.emeraldgrouppublishing.com/opinion-and-blog/rape-myths-jury-deliberations-and-conversation-analysis-a-new-approach-age-old

Roebers, C. M., & Schneider, W. (2001). Individual differences in children's eyewitness recall: The influence of intelligence and shyness. *Applied Developmental Science*, *5*(1), 9-20. https://doi.org/10.1207/S1532480XADS0501_2

Roediger, H. L., & McDermott, K. B. (1995). Creating false memories: Remembering words not presented in lists. *Journal of experimental psychology: Learning, Memory, and Cognition*, *21*(4), 803.

Ryan, S., Willmott, D., Sherretts, N. & Kielkiewicz, K. (2017). A Psycho-Legal Analysis and Criminal Trajectory of Female Child Serial Killer Beverley Allitt. *European Journal of Current Legal Issues*, 22(2).

Samuelson, K. W. (2011). Post-traumatic stress disorder and declarative memory functioning: a review. *Dialogues in clinical neuroscience*, *13*(3), 346-351. https://doi.org/10.31887/DCNS.2011.13.2/ksamuelson

Shields, G. S., Sazma, M. A., McCullough, A. M., & Yonelinas, A. P. (2017). The effects of acute stress on episodic memory: A meta-analysis and integrative review. *Psychological bulletin*, *143*(6), 636. https://psycnet.apa.org/doi/10.1037/bul0000100

Simons, D. J., & Chabris, C. F. (2011). What people believe about how memory works: A representative survey of the US population. *PloS one*, *6*(8), e22757. https://doi.org/10.1371/journal.pone.0022757

Springle, A., Dreier, R., & Goldwasser, S. (2023). Trusting traumatic memory: Considerations from memory Science. *Philosophy of Science*, *90*(5), 1060-1068.

Steblay, N. M. (1992). A meta-analytic review of the weapon focus effect. *Law and human behavior*, *16*(4), 413-424.

Stevens, J. S., Reddy, R., Kim, Y. J., van Rooij, S. J., Ely, T. D., Hamann, S., Ressler, K.J., & Jovanovic, T. (2018). Episodic memory after trauma exposure: Medial temporal lobe function is positively related to re-experiencing and inversely related to negative affect symptoms. *NeuroImage: Clinical*, *17*, 650-658. https://doi.org/10.1016/j.nicl.2017.11.016

Strelau, J. (1987). *O inteligencji człowieka*. Wiedza Powszechna.

Sumampouw, N., Bjørndal, L. D., Magnussen, S., Otgaar, H., & Brennen, T. (2022). Knowledge about eyewitness testimony: a survey of Indonesian police officers and psychologists. *Psychology, Crime & Law*, *28*(8), 763-777. https://doi.org/10.1080/1068316X.2021.1962868

Sutherland, R., & Hayne, H. (2001). The effect of postevent information on adults' eyewitness reports. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *15*(3), 249-263.

Ternes, M., & Yuille, J. C. (2008). Eyewitness memory and eyewitness identification performance in adults with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities*, *21*(6), 519-531. https://doi.org/10.1111/j.1468-3148.2008.00425.x

Thomas, A. K., & Loftus, E. F. (2002). Creating bizarre false memories through imagination. *Memory & cognition*, *30*(3), 423-431.

Wang, S. K., Feng, M., Fang, Y., Lv, L., Sun, G. L., Yang, S. L., Guo, P., Cheng, S.F., Qian, M.C., & Chen, H. X. (2023). Psychological trauma, posttraumatic stress disorder and trauma-related depression: A mini-review. *World journal of psychiatry*, *13*(6), 331. https://doi.org/10.5498/wjp.v13.i6.331

Wells, G. L. (1978). Applied eyewitness-testimony research: System variables and estimator variables. *Journal of Personality and Social Psychology*, *36*(12), 1546. https://psycnet.apa.org/doi/10.1037/0022-3514.36.12.1546

Wells, G. L. (1985). The eyewitness. *The psychology of evidence and trial procedure*, 43-66.

Wells, G. L., & Loftus, E. F. (2003). Eyewitness memory for people and events. *Handbook of psychology: Forensic psychology*, *11*, 149-160.

Wells, G. L., & Olson, E. A. (2003). Eyewitness testimony. *Annual review of Psychology*, *54*(1), 277-295. https://doi.org/10.1146/annurev.psych.54.101601.145028

Willmott, D. (2016). Is Jury Bias Preventing Justice for Rape Victims? *The Conversation.*

Willmott, D. (2017). Is it Strange or is it Scary? Examining Salience and Arousal Explanations of the "Weapons Focus Effect". *Internet Journal of Criminology.*

Willmott, D., & Sherretts, N. (2016). Individual Differences in Eyewitness Identification Accuracy between Sequential and Simultaneous Line-ups: Consequences for Police Practice and Jury Decisions. *Current Issues in Personality Psychology*, 4(4), 228-239. https://doi.org/10.5114/cipp.2016.62701n

Wise, R. A., & Safer, M. A. (2004). What US judges know and believe about eyewitness testimony. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *18*(4), 427-443. https://doi.org/10.1002/acp.993