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ASSIGNMENT 1: Essay

AI ACKNOWLEDGEMENT

I acknowledge that I used Grammarly on 26th August 2020 to check my spellings and grammars.

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1.0 Introduction

The ability to recall and describe events as they happened, especially in criminal and conviction cases, is known as eyewitness memory. Eyewitness testimony is frequently crucial in police investigations and court proceedings. The fact that memory is not like a videotape is demonstrated by psychological studies. Encoding, storing and retrieving it all involves a process. Numerous things can affect each phase. An individual's level of focus during the event is one such aspect that impacts what will be recorded and processed, accordingly. Furthermore, knowledge acquired during the incident may alter how it is remembered. Due to humans' memory intrinsic limitations and the possibility of memory errors and overconfidence brought on by repeated questioning, eyewitness testimonies are rarely entirely correct (Wulff & Thomas, 2021).

The reliability of witness recall was questioned by scholars such as Alfred Binet and Hugo Munsterberg in the late 19th century, which gave rise to the field of eyewitness psychology (Marr et al., 2021). Since then, this study has developed into a major interdisciplinary topic that combines forensic psychology, psychology and neuroscience. The current understanding highlights how psychological factors have a significant impact on memory encoding, perception and retrieval. The quick spread of information via social media and modern technology makes evaluating the credibility of eyewitness accounts even more difficult (Yu, 2025).

2.0 Cognitive Factor 1: Stress and Emotional Arousal

2.1 Explanation of Factor

Studies show that stress affects memory and attention processes both immediately and over time. Acute stress has been linked to changes in attentional systems, even though stress does not seem to directly affect memory establishment and consolidation. A trade-off between processing unnecessary details and retaining relevant information may arise from these changes. As a result, increased stress and arousal cause neurological and cognitive alterations that may, ironically, make memory storage easier. Changes in temporary attention brought on by acute stressors might cause focus to zero in, leading to adjustments that favor processing prominent aspects while reducing examination of irrelevant stimuli. Acute stress increases attention to danger-related stimuli by amplifying the amygdala's role within the salience network. Studies show that the recollection of negative emotional stimuli is higher than that of positive emotional stimuli after acute stress (Thomas & Wulff, 2023).

2.2 Attentional Narrowing Theory

The term attentional narrowing is described as the unintentional focus of attention on a particular information stream, a diagnostic theory, or a task goal for longer than is ideal (Prinet & Sarter, 2015). The limited attentional capacity of humans makes it difficult to process every external stimulus. Attentional lapses can result from external distractions that

further impair concentration, such as social interaction or smartphone use. Inattention blindness, a condition in which people fail to recognise unexpected or salient stimuli within a complex visual field, is one such lapse (Wulff & Thomas, 2021). For example, people who are not exactly keeping an eye on a criminal act could not see it happen. The idea that a witness's subsequent memory of an incident is influenced by their visual concentration is supported by this observation. Stress can cause attentional narrowing, which may have an effect on memory recall. According to Thomas and Wulff (2023), acute stress can focus attention on important information, improving memory for important facts while reducing recall for unimportant ones.

2.3 Empirical Research, Strengths and Limitations

Stress and emotional arousal play a complex role in eyewitness memory, according to empirical data. Research by Price et al. (2021) examined the effects of stress on eyewitness identification. This study had 129 participants, who saw a staged theft before completing the identification assignment. In this research, both subjective stress assessments and physiological markers, including blood pressure, cortisol and heart rate, were used to gauge stress levels. The study discovered no significant effect of stress on identification accuracy or the willingness to choose, refuting the theory that elevated stress will negatively impact eyewitness identification accuracy. This study's primary benefit is that it avoids the subjectivity of stress expression by using a variety of stress indicators. Additionally, it specifies tasks that are conceivable in the framework of eyewitness memory research and employs a staged crime. However, there is a lack of ecological validity inherent in the laboratory setting. The results appear to have limited application because the participants are

aware that they are participating in an experiment rather than in an actual crime (Price et al., 2021).

3.0 Cognitive Factor 2: Post-Event Information

3.1 Explanation of Factor

Any type of inaccurate or deceptive information can affect how well someone remembers the initial event. The term misinformation effect refers to this phenomenon. The mistakes resulting from the misinformation effect have significant consequences for justice because witness testimony is so crucial to the legal system. There are numerous sources of false information, such as the interactions witnesses have with one another, the interrogation they endure during police interviews and other reports made in the media (Sharman et al., 2023). The misinformation effect is acknowledged as a phenomenon, although little research has been done on how it arises in connection to media. It is still unknown what makes the witnesses vulnerable to false information gathered from social media about the incident. First, media reports stir up concerns that people would be overwhelmed with unrelated information due to how quickly they are circulated. Second, news reports frequently cite the testimonies of other witnesses, whose perceptions and recollections of events may be inaccurate. Lastly, witnesses may actively seek out information to stay up to date on criminal activity (Crittenden et al., 2026).

3.2 Reconstructive Memory and Source Monitoring

The impact of post-event misinformation is explained by the reconstructive nature of memory. This perspective holds that memory is actively rebuilding an original experience as opposed to passively recalling it. Eyewitnesses may causally integrate additional information they learn after the incident to their first recollections of it (Anakwah et al., 2024). One explanation for this specific situation is the Source Monitoring Framework. It focuses on the concept that people examine the source of information they recall, differentiate between what they personally experienced and what they learn from others and the media. Therefore, when someone recalls false information but ties it to the real incident, it could result in a source monitoring error. Research by Nahleen et al. (2022) has demonstrated the significance of source monitoring. According to their research, when study participants witnessed an emotionally charged occurrence and were later exposed to false information, their memories became distorted. However, encouraging people to assess the information's source lowers the inaccuracies. This implies that false information does not entirely replace accurate knowledge, but makes it difficult to tell the truth from false information.

3.3 Empirical Research, Strengths and Limitations

Recent research shows that eyewitness memory can be altered by later information, suggesting a deeper understanding of mechanisms underlying this occurrence. Szpitalak and Polczyk (2021) therefore examined whether self-affirmation and its increased level could lessen the vulnerability to false information. The purpose of this study was to examine how

participants' recollections of a particular incident were impacted by receiving false information. The findings demonstrated that individuals who engaged in more self-affirmation practice relied less on the false information that was given to them following the incident. In this sense, memory confidence seemed to be crucial. However, in terms of the concepts that are applied in actual situations when witnesses convey false information, this information might be too basic (Szpitalak & Polczyk, 2021).

4.0 Cognitive Factor: Leading/ Suggestive Questions

4.1 Explanation of Factor

Certain questions may be used to force a witness's response during questioning. In this way, leading questions differ from neutral questions in that the former direct the witness toward a specific response, while the latter let them respond freely. For example, the neutral question "How fast was the car driving?" allows the witness to provide their own interpretation of the response. On the other hand, the question "How fast was the car driving when it bumped into another car?" incorporates the word "bumped" and could affect the witness's recollection of what happened. However, since interviews usually happen some time after an incident, leading questions become especially crucial since this allows the witness to recall memories from pre-trial interviews (Dalton et al., 2020). Research indicates that the quantity and quality of information obtained can be influenced by the question and interview approach. Leading questions, for example, are used when police wish to get some

descriptions from a suspect, according to an examination of police interviews. On the other hand, open-ended questions enable witnesses to elaborate (Wade & Spearing, 2022).

4.2 Reconstructive Memory

The reconstructive nature of the process, which suggests that recalling entails creating rather than just reproducing the same information. This is a characteristic of memory processes related to suggestibility. Applicable schemata are used to create memories of events. Witnesses can accept and use such developments in their memories of events according to the information offered by questions and relevant schemata when leading questions allow for the transformation of unique situations into common and reasonable ones. As a result, any questioning strategy has the capacity to start a distortion process (Pino, 2015).

4.3 Empirical Research, Strengths and Limitations

The information that is now available indicates that a question's wording can affect eyewitness testimony. However, the specifics of this influence vary depending on the situation. The accuracy of eyewitness statements may be impacted by the wording of leading questions, according to research by Gous and Wheatcroft (2020). Their work was significant since it was carried out in an environment similar to interviews or police investigations. The conclusion in this study applies to actual forensic settings because it is particular in nature

and immediately relates to practical questioning methods. Though not all aspects of police interviews can be recreated in a lab setting, several limitations of the experimental designs must be considered.

5.0 Comparison/ Synthesis

Acute stress is known to have a detrimental effect on the ability to store and retrieve non-central information. On the other hand, moderate stress levels have little to no beneficial effects on the recall of key knowledge. It is challenging to generalize the relationship between stress and memory since it depends on a number of variables, including the methodology used, the time the stress was introduced and the kinds of research activities. Regardless, rather than affecting cognitive processes, stress functions as a modulator of attentional and memory resources (Yu, 2025). Post-event information appears after an initial incident has been witnessed. A three-stage approach is commonly used to study the phenomenon of the misinformation effect, which involves witnessing an event, coming across false information, and then taking a memory test. Research indicates that circumstances that exist both during and after the initial occurrence may influence an individual's susceptibility to false information. For example, increased visual load during first observation may make people more vulnerable to false information later on since there would be less cognitive capacity to encode the initial experience (Brassil et al., 2024). Leading questions also have an impact on memory retrieval because specific wording can affect witness recollections and introduce elements that were not present during the original incident (Gous & Wheatcroft, 2020). Collectively, these three elements suggest that eyewitness memory is prone to distortion both

during the initial encoding of the event and throughout the subsequent retention period, before reporting.

Despite their temporal differences, they operate interdependently. Stress has an impact on how information is initially encoded, but later exposure to false information and interrogation may have an impact on how that information is retrieved and reported. Wulff and Thomas (2021) highlight that attention, encoding and retrieval processes must be examined in conjunction, as errors at one stage can jeopardise later memory performance. A witness who is under a lot of stress, for example, may encode fewer incidental facts during an event and then comes across false information about those particular aspects. If a leading question is provided during retrieval, the combination of incomplete initial encoding and exposure to post-event misinformation makes correct recall much more challenging. This interaction shows that a single cognitive mechanism is rarely the cause of eyewitness errors. However, existing evidence does not imply that these cognitive variables consistently reduce eyewitness accuracy. Studies on stress indicate various outcomes depending on characteristics such as stress level, temporal proximity to the incident, and whether the memory is about central or peripheral elements (Marr et al., 2021). Furthermore, a systematic review by Brassil et al. (2024) found that, while better cognitive abilities are generally associated with lower sensitivity to misinformation, no single cognitive attribute gives total immunity.

6.0 Practical and Ethical Implications

6.1 Practical Implications

Legal experts and jurors must have a solid grasp of eyewitness factors and the ability to apply them to the particular circumstances of a case in order to reduce eyewitness errors. Similarly, law enforcement officers must be able to detect key variables at the crime scene and conduct proper interviews and identification procedures. Systematic education is required because key individuals in the criminal justice system frequently don't know enough about these aspects. Judges and lawyers should receive these instructions as part of their ongoing training, and it should be incorporated into the law school curriculum. Additionally, professional organizations should offer specialized training to psychologists and psychiatrists who testify in these matters (Wise et al., 2014). In terms of investigative techniques, the first step in an interview should be to give the witness control to create a relaxed atmosphere. This step is required to reduce unintended bias since witnesses can be influenced by perceived authority figures like law enforcement personnel. It is advised to ask the investigators to mentally recreate the scene to encourage accurate memory. Interviewers are also encouraged not to hurry eyewitnesses while they try to cognitively retrieve information to anticipate prolonged pauses. This strategy differs from regular police protocols, which typically involves breaks and need specific reporting order. Interviewers may ask open-ended questions after their first free recall phase, but they should be mindful that certain wording may cause memory distortion (Lacy & Stark, 2013).

6.2 Ethical Implications

These results have particular ethical implications for professional dealings with eyewitnesses. It is the responsibility of investigators to avoid contaminating witness recollections by suggestive, repetitive, or leading questions. The fact that the witnesses frequently see law enforcement officers as authoritative people adds to this dynamic by making them more receptive to information that is indicated. Research on Malaysian police interviewers shows gaps in their knowledge of evidence-based interrogation techniques, highlighting the necessity of focused supervision and training (Chung et al., 2021). Objective information retrieval must be the main goal of ethical interviewing techniques rather than obtaining the answers that only support an investigative theory. Respecting this norm is essential. Incorrect eyewitness identifications lead to serious legal consequences, such as the wrongful conviction of innocent people (Fradella, 2023).

7.0 Conclusion

In conclusion, memory is intrinsically prone to distortion and loss, which is fueled by adaptive mechanisms that help in generalization and forgetting. These distortions are caused by the same neurological process that allows memory consolidation and updating. However, memory is often misinterpreted in legal settings, which results in false assumptions about its accuracy. This disparity emphasizes the need for better instruction on memory functions. A more exact knowledge of the complex and frequently counterintuitive aspects that influence

memory accuracy is essential in legal settings. The legal system must reconsider the credibility attributed to eyewitness testimony. Since memory is still an adaptive reconstructive process, going through a traumatic incident does not produce an unchangeable or objective record. However, existing research does not imply that eyewitness testimony is always incorrect. The impact of stress is determined by its intensity, timing, and specific information stored, just as sensitivity to information and leading questions differs between individuals and situational settings.

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