Predicting accuracy in eyewitness testimonies with memory retrieval effort and confidence

[Author Name(s), First M. Last, Omit Titles and Degrees]

[Institutional Affiliation(s)]

Author Note

[Include any grant/funding information and a complete correspondence address.]

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The present study endeavours to deliver vision into potential differences among fairly reported proper and improper eyewitness testimonies. The study replicated and elaborated the research of (Lindholm et al. 2018) in which memory correctness was found to be linked to indicators of retrieval effort in witnesses' responses. To find out the accuracy in eyewitness evidence is an important endeavour to be explored (Lindholm, 2008). The previous studies have provided an ambiguous statement regarding accuracy and non-accuracy of eyewitness evidence. Few studies were completed to find out and to differentiate between the correct and incorrect statement. Various studies have been performed in which participants were examined by asking questions regarding an incident which was shown to them during the research period (Gustafsson, Lindholm, & Jönsson, 2019a). The delays in providing the statements, recalling the incident and incorrect information depicted by the participants were evaluated. **Eyewitness evidence is the only major source of investigation (Roediger & DeSoto, 2014). The reliability of eyewitness evidence is a question for the researchers as well as the judiciary which further needs a venture to be explored.**

**Example 1**

A study was conducted (Gustaffson et al., 2019) in which the accuracy of the eyewitness testimonies were predicted in association with memory retrieval and confidence. This study suggested that incorrect memories are more difficult to retrieve. In the study, retrieval suspension was added as a forecaster for memory effort. It was imagined in the study that the cues of retrieval effort and the confidence will forecast memory precision. The researchers further supposed that confidence will not offer distinctive variance in forecasting accuracy. The study population was the females from a psychology class. They were 22 in number. They were asked to see a simulated crime incident in a video and later were videotaped while answering the questions.This study advances an innovative support to the concept that retrieval effort in eyewitness responses is dominant for distinguishing accurate from inaccurate memory of incident details. This shows that effort cues moderately facilitate the association between accuracy and confidence (Wixted, Read, & Lindsay, 2016). These conclusions propose favourable new ways of refining decisions for eyewitness evidence.

**Example 2**

Another study evaluated the appropriateness of eyewitness identification by multiple trial experiments (Mansour et al.,2017). This suggested that multiple-trial proposals seem to have negligible effects on eyewitness accuracy, choosing, and confidence (Mansour et al., 2012). Scientists should utilize multiple-trial strategies for performing eyewitness identification tests. Females of college-age were introduced as participants and approximately all were randomly assigned between subject manipulations of lineup type and disguise type. Line up type was simultaneous and sequential while disguise type were toque and stocking. The results of the study show that there is principally no disadvantage for using multiple lineup trials for diverse objectives to observe accuracy, choosing, and confidence (Vrij, 2019). This suggested that it is beneficial to use multiple lineup trials for manipulations of memory strength, disguise category, grade of disguise, and lineup type.

**Empirical and theoretical relevance**

Eyewitness memoirs are normally serious sources of evidence for examining what occurred in a criminal offence (Wells et al., (2006). Studies predicting accuracy in eyewitness evidence and different multiple trails in distinguishing accurate and inaccurate statements are most relevant to each other (Lindholm, 2008). Even though, eyewitness evidence influencing a dominant part in criminal inquiries and decision-making, eyewitness confirmation has mostly been considered to be unreliable and establishes the main causative factor behind illegal convictions (Garrett, 2011). Mistaken eyewitness news is due to a witness’ thoughtful lies about the target incident (DePaulo et al, 2003). Another main source of eyewitness mistake, is when a witness provides an authentic report but recalls things erroneously (Vrij et al, 2017) (Perfect, Hollins, & Hunt, 2000). Differentiation between genuine correct and incorrect recollection of memories is critical to attain valid legal decisions (Dodge et al., 1984). The research has verified that individuals have great trouble in trying to present the accuracy of others’ memories (Lindholm, 2005). Although it is significant to the legal process little study has examined the degree to which mistaken eyewitness memories are accurate (Dunning & Perretta, 2002).

**Predicting human behaviour**

Prediction of human behaviour and change of behaviour is a complex system which depends on the ability and intention to perform the behaviour (Allwood, Ask, & Granhag, 2005). Viewing behaviour will influence a person's intention to anticipate that behaviour positively or negatively (Weidemann & Kahana, 2016). To anticipate an event positively or negatively (Nussinson & Koriat, 2008), it is relevant to the same question which we are studying that is to find out the accurate and inaccurate statement of eyewitness evidence (Brewer, Caon, Todd, & Weber, 2006). The theory of planned behaviour is positively associated with the empirical experimental trials performed in these studies (Dunning & Perretta, 2002). Somehow, empirical aspects judged and then evaluating the results from these aspects can predict human behaviour (Read & Connolly, 2017). Therefore, the part of response dormancy and additional effort cues for examining accuracy is a subject that deserves advance clarification and research (Odinot, Wolters, & van Koppen, 2009).

**Relation to the literature**

There is a need to observe the appropriateness in the findings of multiple trial experiments for eyewitness identification studies (Mansour, Lindsay, 2017). The study aims to assess the strength of the researches previously done to predict the accuracy in eyewitnesses testimonies with confidence (Gustafsson, Lindholm, & Jönsson, 2019b). Based on their outcomes, it is reviewed how confidence and memory retrieval forecast memory accuracy. It is important to assess whether a single experiment or multiple trail designs are more efficient to make memory retrieval with accuracy (Koriat, 2008). Eyewitness evaluation experiments characteristically include a single experiment. A member views an incident and then makes a lineup assessment. We inspected the effects of various forensically appropriate variables such as memory strength, lineup type, kind of disguise, grade of disguise, on eyewitness accuracy, selecting, and confidence. Literature reviewed in the studies has suggested that various approaches to forecasting memory accuracy.

**Conclusion**

Extending the previous researches (Gustaffson et al., 2019), it is strongly recommended to predict accuracy behind eyewitness evidence, that retrieval effort cues such as fillers, delays as well as confidence can predict memory accuracy (Brewer et al., 2006). The accuracy of eyewitness evidence is significantly important to be assessed to examine the incident occurred by a criminal offence (Mansour, Beaudry, & Lindsay, 2017).

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