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## Live, video, and photo eyewitness identification procedures

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## **Title of the review**

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Live, video, and photo eyewitness identification procedures: A systematic review

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## **Background**

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In criminal investigations, identification procedures are used to obtain information about a suspect's guilt. If an investigation leads to the suspicion of the person who actually committed the crime, the suspect who appears for the identification procedure would be guilty. But if an investigation goes astray and leads to the suspicion of someone who did not commit the crime, the suspect would be innocent. Normally, investigators interpret an eyewitness identification of the suspect as an indication that the suspect is indeed guilty. However, eyewitness identifications are not always reliable.

The problem of faulty eyewitness identification is well documented. In numerous reviews, involving eyewitnesses to real crimes, mistaken identification has been linked to wrongful convictions (Devlin, 1976; Innocence Project, 2017; Rattner, 1988; Wells et al., 1998). Although the frequency of mistaken identifications of innocent suspects is not known, 32% of suspects identified in a recent field experiment had not been prosecuted at a 1-year follow-up (Amendola & Wixted, 2015; Wells, Steblay, & Dysart, 2015). In addition to taking measures to prevent the devastating consequences of a mistaken identification, it is similarly important to discourage witnesses from mistakenly reporting that a guilty suspect is innocent (Clark, 2012; National Research Council, 2014). Thus, any intervention designed to improve eyewitness identification procedures must consider its implications for both identifications of guilty suspects and misidentifications of innocent suspects.

A considerable literature of experimental research on eyewitness identification procedures has accumulated over the past few decades. In eyewitness identification experiments, witnesses typically observe a target person and then participate in an identification procedure with a suspect who is either guilty (target-present condition) or innocent (target-absent condition). Using such methods, researchers have revealed a host of procedural factors that increase the likelihood of eyewitness identification errors (Horry, Palmer, & Brewer, 2012; Lindsay & Wells, 1985; Malpass & Devine, 1981; Wells, Rydell, & Seelau, 1993).

The identification medium is one factor that may influence eyewitness identification decisions. Across jurisdictions, law enforcement agencies vary in their use of live, video, and photo identification procedures. For example, respondents to a survey of police agencies in the USA predominately reported the use of photo identification procedures, but a significant minority also reported the use of live identification procedures (Police Executive Research Forum, 2013). Conversely, policy guidance in England advises that video identification procedures should normally be used (Code D, Police and Criminal Evidence Act 1984, revised 2013). The basis for these guidelines is unclear and not yet supported by clear evidence. This

systematic review will examine whether the identification medium affects eyewitness decision-making in target-present and target-absent conditions.

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## **Objectives**

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The objective of this systematic review is to answer the following questions:

- (1) Does the identification medium affect the likelihood of an accurate eyewitness identification decision?
  - (2) Does the identification medium affect the likelihood that any member of the lineup will be chosen (i.e., does it affect the willingness to make an identification)?
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## **Existing reviews**

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We are familiar with three reviews in which the identification medium is discussed. The first and only review that focused exclusively on the identification medium led to the tentative conclusion that “based on available research, there is no reason to believe that live lineups, videotaped lineups, or photo arrays produce substantial differences in identification performance” (Cutler, Berman, Penrod, & Fisher, 1994, p. 181). In the second review, Brewer and Palmer (2010) examined a number of variables in a broad examination of the literature and concluded that “no clear and empirically supported direction can be given” on identification medium effects. In the third review (Clark, Moreland, & Rush, 2015), the identification medium was again examined as part of a broader review of identification procedures. Clark et al. (2015) reported meta-analytic comparisons between photo and video lineups and between video and live lineups, but in these meta-analyses the studies were not weighted, several published studies seem to have been missed, and no efforts were reported to obtain unpublished data. In our literature review, we did not find any systematic reviews that examined the effect of the identification medium on eyewitness identification decisions.

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## **Intervention**

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The intervention is the identification medium: live, video, or photo. Witnesses to an event view a target person, then after some delay are presented with an identification procedure using one of the medium types. An identification procedure may be used to present a single person (showup) or multiple people (lineup). The target person may be present or absent for the identification procedure. The witness can identify a person or state that the target person is absent.

At a live identification procedure, witnesses inspect the individual(s) in person. The witness may inspect the individual(s) while in the same room or from behind a one-way mirror.

At a video identification procedure, witnesses view either a single video clip of the individual(s) or separate clips of each individual.

At a photo identification procedure, witnesses view photographic images of the individual(s).

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## Population

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The population of interest is witness-participants who have observed a target person and then participated in an identification procedure. Witnesses of all ages and demographics will be included.

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## Outcomes

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### Target Present Condition

- **Correct Identification.** A correct identification occurs if the witness identifies the target person.
- **Filler Identification (Target Present).** A filler identification occurs if the witness identifies someone who is not the target. Regardless of whether the target is present or absent, a filler identification is an error.
- **Incorrect Rejection.** An incorrect rejection occurs if the target is present and the witness does not identify anyone.

### Target Absent Condition

- **Innocent Suspect Identification.** An innocent suspect identification rate is estimated to be the proportion of identifications in the target-absent condition divided by the number of people who were presented in the identification procedure.
- **Filler Identification (Target Absent).** A filler identification rate in the target-absent condition is estimated by subtracting the innocent suspect identification rate from the total identification rate in the target-absent condition.
- **Correct Rejection.** A correct rejection occurs if the target is absent and the witness does not identify anyone.

### Additional Measures

- **Discriminability ( $d$ ).** Discriminability is a measure of a group's ability to distinguish between the target and non-targets.
- **Criterion ( $c$ ).** Criterion is a measure of a group's bias toward or against making an identification.
- **Choosing.** Choosing occurs if a witness makes an identification (irrespective of accuracy).

- **Diagnosticity Ratio.** The diagnosticity ratio is probability that the suspect is guilty, given that the suspect was identified.

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## Study designs

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Eligible studies need to have compared two or more identification medium types (live, photo, video) on an identification task. Exposure to the target person/people may have occurred using live, video, or photo/slideshow events. The identification procedure may present multiple people for identification (lineup) or a single person for identification (showup).

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## Roles and responsibilities

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- **Content:** Ryan Fitzgerald, Eva Rubínová, Heather Price, Lorraine Hope, and Tim Valentine all have expertise pertaining to eyewitness identification research and practice. Tim Valentine has published several journal articles that specifically focus on the identification medium.
- **Systematic review methods:** Ryan Fitzgerald and Heather Price have collaborated on two meta-analyses in the field of eyewitness identification. Ryan Fitzgerald is familiar with best practices in systematic reviews.
- **Statistical analysis:** Ryan Fitzgerald, Eva Rubínová, Heather Price, Lorraine Hope, and Tim Valentine all have relevant expertise in statistical analysis of eyewitness identification data. Ryan Fitzgerald and Eva Rubínová have relevant expertise in meta-analysis.
- **Information retrieval:** Ryan Fitzgerald has conducted literature searches for two meta-analyses.

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Funding for this systematic review has been granted from the Economic and Social Research Council (UK). The funding is available until September 30, 2018.

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## Potential conflicts of interest

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Tim Valentine has conducted primary research on the identification medium and published several journal articles. Ryan Fitzgerald and Eva Rubínová have conducted primary research on the identification medium and have a manuscript in preparation. No authors have any financial conflicts of interest.

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## Preliminary timeframe

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January, 2017	Submit title registration to Campbell
April, 2017	Submit protocol to Campbell
May, 2017	Literature search and screen abstracts
June-July, 2017	Code studies and extract data
August-September, 2017	Analyze data
October-December, 2017	Write review
January, 2018	Submit review to Campbell

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## AUTHOR DECLARATION

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