Confidence and Accuracy of Eyewitness Identification of Familiar Faces

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Background

- ~70% of wrongful convictions involve eyewitness misidentification (innocenceproject.org)
- Most research concerns stranger identifications (IDs)
- 67% of eyewitnesses report knowing the criminal prior to crime (Flowe et al., 2011)
- No one has tested the accuracy of IDs of familiar culprits (familiar IDs)
- Eyewitness confidence influences mock juror perceptions of eyewitness reliability, regardless of familiarity (Vallano et al., 2019)
- There is positive relationship between confidence and accuracy for stranger IDs, but no research on familiar IDs has been done

References

Eyewitness identification reform. (2020, December 17). Retrieved August 29, 2021, from https://innocenceproject.org/eyewitness-identification-reform/

Flowe, H. D., Mehta, A., & Ebbesen, E. B. (2011). The role of eyewitness identification evidence in felony case dispositions. Psychology, Public Policy, and Law, 17(1), 140-159. doi:10.1037/a0021311

Vallano, J. P., Pettalia, J., Pica, E., & Pozzulo, J. (2019). An examination of mock jurors' judgments in familiar identification cases. Journal of Police and Criminal Psychology, 34(2), 121-133. doi:10.1007/s11896-018-9266-0

Research Questions

- Is the accuracy of familiar IDs similar to unfamiliar IDs?
- Is the confidence-accuracy relationship for familiar IDs and unfamiliar IDs similar?

Hypotheses

- More IDs of guilty suspects and fewer IDs of innocent suspects when the eyewitness is familiar vs unfamiliar with a mock criminal
- Stronger confidence-accuracy relationship for familiar than unfamiliar IDs
- Highly confident IDs will be highly accurate, regardless of familiarity
- Confidence will be higher when participants view familiar vs unfamiliar mock criminals

This project was pre-registered: osf.io/savt9

Twitter: @Cnattyworld & @eyewitnessIDup

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Methodology

Participants

- *N* = 16 from the Queen Margaret University (QMU) student body

Design

- 2 (Familiarity: unfamiliar, familiar) x 2 (Target Presence: target-present, target-absent)
- Within subjects

Materials

- I created four 10-second long, mock-crime videos and lineups
- 2 videos depict lecturers from QMU (i.e., familiar people)
- 2 videos depict lecturers from the University of Pittsburgh at Greenburgh (i.e., unfamiliar people)
- The actors walked into frame, looked for and picked up an object, stood up and left frame to maximize facial encoding
- For each video, I created two lineups for the actor—one containing the actor and 5 filler persons (target-present) and one containing 6 filler persons (target-absent)
- Lineups were constructed using the match to description approach

Measures

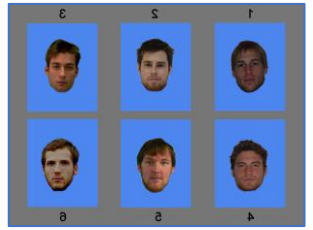
- Target-present lineups: Correct ID vs. Incorrect ID/Rejection
- Target-absent lineups: Incorrect IDs vs Correct Rejections
- Confidence in lineup decisions (0-100%)

Procedure

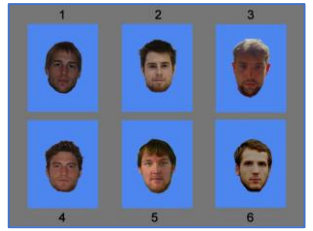
Mock-crime video x 4

Where's Wally? 30 seconds

Target-absent Lineup



Target-present Lineup



How confident are you in your decision? (0-100%)

Analyses

- Hypothesis 1: Chi^2 goodness of fit test
- Hypothesis 2: Binary logistic regression
- Hypothesis 3: Binary logistic regression
- Hypothesis 4: Analysis of variance (ANOVA)

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Results

- Hypothesis 1 was not supported. The proportion of correct IDs did not differ significantly between familiar (.25) and unfamiliar r(.19) mock criminals, $X^2(1, N = 16) = 0.47$, $p = .53$. However, we did find fewer false IDs with familiar (.44) vs unfamiliar (.81) faces, $X^2(1, N = 16) = 0.86$, $p = .03$.

- Hypothesis 2 was not supported. There was no interaction of familiarity and confidence on accuracy for lineup decisions, $z = 0.07$, $p = .94$, $OR = 0.99$.

- Hypothesis 3 was not supported. Confidence did not predict accuracy overall, $z = 2.1$, $p = .0.36$, $OR = 1.19$, or when we examined only high-confidence lineup decisions, $z = 1.68$, $p = .093$, $OR = 1.25$.

- Consistent with our fourth hypothesis, participants were more confident in lineup decisions when the actor was familiar ($M = 6.34$, [56.8, 70.1]) than unfamiliar ($M = 5.22$, [45.5, 58.8]), $F(1,126) = 5.61$, $p = .019$, $d = .42$.

Limitations

We were unable to collect as many participants as we had hoped in this pilot study (our planned sample was $N = 100$), making our data less generalisable and our analyses underpowered.

Future Research

In the fall, I will work with Dr. Mansour of QMU and Dr. Vallano of the University of Pittsburgh at Greenburg to test these research questions with larger samples, and samples that include students from QMU and the University of Pittsburgh at Greenburg.

Conclusions

Our sample was underpowered, therefore, we cannot draw firm conclusions about familiar compared to unfamiliar IDs.

The current results suggest that :

1) Familiarity has no effect on IDs of guilty suspects bur reduces IDs of innocent suspects—people are more accurate with lineups of familiar than unfamiliar culprits
2) People are more confident making a lineup decision for familiar than unfamiliar culprits