



**Developmental  
Considerations in Children's  
Eyewitness Identification**  
*A Bibliography*

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**April 2025**

**Championing and Strengthening the  
Global Response to Child Abuse**

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Preferred citation: National Children's Advocacy Center. (2025). Developmental Considerations in Children's Eyewitness Identification: A Bibliography. Huntsville, AL: Author.

This project was supported by a grant awarded by the Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs, U.S. Department of Justice. Points of view or opinions in this document are those of the author and do not necessarily represent the official position or policies of the U.S. Department of Justice.

## Scope

This bibliography provides literature significant to the developmental issues related to children's eyewitness identification in photographic and person lineups.

## Organization

Publications include articles, book chapters, reports, and research briefs and are arranged in date descending order. Links are provided to full text publications when possible. However, this collection may not be complete. More information can be obtained in the Child Abuse Library Online.

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# Developmental Considerations in Children's Eyewitness Identification

## A Bibliography

Sauerland, M., Wiechert, S., Czarnojan, E., Deiman, E., Dörr, L., Broers, N. J., & Verschuere, B. (2025). [Identification performance across the life span: Lineups and the reaction time-based Concealed Information Test](#). *Cognition*, 254, 105996. DOI:10.1016/j.cognition.2024.105996

Cognitive and social factors can deteriorate eyewitness identification performance in children and older adults. An identification procedure that mitigates the effect of such factors could be beneficial for child and older adult witnesses. In a field experiment, we mapped identification performance in a large community sample (N = 1239) across the lifespan (ages 6–79 years) for two different identification procedures: classic lineups and reaction time-based Concealed Information Test (RT-CIT). Visitors of a science museum or science fair witnessed a recorded mock theft and then took either a classic lineup, or the RT-CIT. Young adults (18–35-year-olds) outperformed younger and older age groups in lineup performance. The RT-CIT showed a moderate capacity to diagnose face recognition and absence of recognition in the target-absent condition. Age did not affect identification with the RT-CIT. However, children were often not able to follow the RT-CIT instructions, leading to a large number of exclusions. A direct comparison of lineup vs. RT-CIT performance showed that children and adolescents showed better identification performance in RT-CIT than lineups. For young adults, there was no difference between the two procedures. The trend turned around at mid-adult age who showed better identification performance when they were given a lineup compared to an RT-CIT. These findings suggest that the RT-CIT might be considered an alternative identification procedure for children and adolescents, offering protection for innocent suspects.

Bruer, K. C., Carr, S. M., Schick, K. D., & Gerbeza, M. (2024). [Reframing confidence instructions to child eyewitness reduces overconfidence but does not improve confidence–accuracy calibration](#). *Applied Cognitive Psychology*, 38(5), e4258. DOI:10.1002/acp.4258

Children are well-documented to exhibit poor confidence–accuracy calibration on lineup identification tasks. Children tend to report overconfidence in their (often inaccurate) lineup identification decisions. This research explored the extent to which school-aged children's ( $N = 142$ ; 6- to 8-year-old) confidence reports are implicitly driven by perceived social pressure to provide a specific confidence rating. Children were randomly assigned to two different confidence instruction conditions: the neutral ( $n = 69$ ) or the reframed conditions ( $n = 73$ ). The reframed instructions encouraged honesty and instructed children to ignore perceived pressure when reporting confidence. Results revealed that the reframed instructions resulted in more conservative confidence judgments; however, this shift did not translate into those confidence ratings better reflecting children's identification accuracy. Overall, these findings provide evidence that, while external or social factors play a contributing role, other aspects of development are likely contributing more to the poor confidence–accuracy calibration observed with child eyewitnesses.

Plate, R. C., Shutts, K., Cochrane, A., Green, C. S., & Pollak, S. D. (2021). Testimony bias lingers across development under uncertainty. *Developmental Psychology*, 57(12), 2150–2164. DOI:10.1037/dev0001253

Children have a powerful ability to track probabilistic information, but there are also situations in which young learners simply follow what another person says or does at the cost of obtaining rewards. This latter phenomenon, sometimes termed bias to trust in testimony, has primarily been studied in children preschool-age and younger, presumably because reasoning capacities improve with age. Less attention has been paid to situations in which testimony bias lingers—one possibility is that children revert to a testimony bias under conditions of uncertainty. Here, participants (4 to 9 years old)

searched for rewards and received testimony that varied in reliability. We find support for testimony bias beyond preschool-age, particularly for uncertain testimony. Children were sensitive to trial-by-trial uncertainty (Experiment 1: N = 102, 59 boys, 43 girls; the sample included nine Hispanic/Latinx, 93 non-Hispanic/Latinx participants, of whom six were Black/African American, seven were Asian American, eight were multiracial, 77 were White, and four indicated “other” or did not respond), and with uncertainty defined as a one-time, unexpected change in the testimony (Experiment 3: N = 129; 68 boys, 61 girls; the sample included 12 Hispanic/Latinx, 117 non-Hispanic/Latinx [10 Black/African American, four Asian American, nine multiracial, 103 White, and three “other”]). However, the impact of the testimony bias decreased with age. These effects were specific to the testimony coming from another person as opposed to resulting from a computer glitch (Experiment 2: N = 89, 52 boys, 37 girls; five Hispanic/Latinx, 80 non-Hispanic/Latinx, of whom one was Black/African American, three were Asian American, 15 were multiracial, 66 were White, and four did not report race). Taken together, these experiments provide evidence of a disproportionate influence of testimony, even in children with more advanced reasoning skills.

Winsor, A. A., Flowe, H. D., Seale-Carlisle, T. M., Killeen, I. M., Hett, D., Jores, T., Ingham, M., Lee, B. P., Stevens, L. M., & Colloff, M. F. (2021). [Child witness expressions of certainty are informative](#). *Journal of Experimental Psychology: General*, 150(11), 2387–2407. DOI:10.1037/xge0001049

Children are frequently witnesses of crime. In the witness literature and legal systems, children are often deemed to have unreliable memories. Yet, in the basic developmental literature, young children can monitor their memory. To address these contradictory conclusions, we reanalyzed the confidence–accuracy relationship in basic and applied research. Confidence provided considerable information about memory accuracy, from at least age 8, but possibly younger. We also conducted an experiment where children in young (4–6 years), middle (7–9 years), and late (10–17

years) childhood ( $N = 2,205$ ) watched a person in a video and then identified that person from a police lineup. Children provided a confidence rating (an explicit judgment) and used an interactive lineup—in which the lineup faces can be rotated—and we analyzed children's viewing behavior (an implicit measure of metacognition). A strong confidence–accuracy relationship was observed from age 10 and an emerging relationship from age 7. A constant likelihood ratio signal-detection model can be used to understand these findings. Moreover, in all ages, interactive viewing behavior differed in children who made correct versus incorrect suspect identifications. Our research reconciles the apparent divide between applied and basic research findings and suggests that the fundamental architecture of metacognition that has previously been evidenced in basic list-learning paradigms also underlies performance on complex applied tasks. Contrary to what is believed by legal practitioners, but similar to what has been found in the basic literature, identifications made by children can be reliable when appropriate metacognitive measures are used to estimate accuracy.

Birch, S. A., Sevenson, R. L., & Baimel, A. (2020). [Children's understanding of when a person's confidence and hesitancy is a cue to their credibility](https://doi.org/10.1371/journal.pone.0227026). *PloS One*, 15(1), e0227026. DOI:10.1371/journal.pone.0227026

The most readily-observable and influential cue to one's credibility is their confidence. Although one's confidence correlates with knowledge, one should not always trust confident sources or disregard hesitant ones. Three experiments ( $N = 662$ ; 3- to 12-year-olds) examined the developmental trajectory of children's understanding of 'calibration': whether a person's confidence or hesitancy correlates with their knowledge. Experiments 1 and 2 provide evidence that children use a person's history of calibration to guide their learning. Experiments 2 and 3 revealed a developmental progression in calibration understanding: Children preferred a well-calibrated over a miscalibrated confident person by around 4 years, whereas even 7- to 8-year-olds were insensitive to calibration

in hesitant people. The widespread implications for social learning, impression formation, and social cognition are discussed.

Brackmann, N., Sauerland, M., & Otgaar, H. (2019). [Developmental trends in lineup performance: Adolescents are more prone to innocent bystander misidentifications than children and adults](#). *Memory & Cognition*, 47, 428–440.  
DOI:10.3758/s13421-018-0877-6

We tested developmental trends in eyewitness identification in biased and unbiased lineups. Our main interest was adolescent's lineup performance compared with children and adults. 7–10-year-olds, 11–13-year-olds, 14–16-year-olds, and adults ( $N = 431$ ) watched a wallet-theft-video and subsequently identified the thief, victim, and witness from simultaneous target-present and target-absent six-person photo lineups. The thief-absent lineup included a bystander previously seen in thief proximity. Research on unconscious transference suggested a selection bias toward the bystander in adults and 11–13-year-olds, but not in younger children. Confirming our hypothesis, adolescents were more prone to bystander bias than all other age groups. This may be due to adolescents making more inferential errors than children, as predicted by fuzzy-trace theory and associative-activation theory, combined with lower inhibition control in adolescents compared with adults. We also replicated a clothing bias for all age groups and age-related performance differences in our unbiased lineups. Consistent with previous findings, participants were generally overconfident in their decisions, even though confidence was a better predictor of accuracy in older compared with younger participants. With this study, we show that adolescents have an increased tendency to misidentify an innocent bystander. Continued efforts are needed to disentangle how adolescents in comparison to other age groups perform in forensically relevant situations.



Brown, D. A., & Lamb, M. E. (2019). Forks in the road, routes chosen, and journeys that beckon: A selective review of scholarship on children's testimony. *Applied Cognitive Psychology, 33*(4), 480–488. DOI:10.1002/acp.3511

In this brief review, we reflect upon the key contributions of research examining children's eyewitness testimony. Children's testimonial ability became a focus of interest for researchers about 40 years ago in the wake of several high-profile child abuse cases that prompted questions about children's reliability in the face of problematic interviewing and other suggestive influences. Since that time, scholars have examined children's capacity to provide accurate and detailed descriptions of their experiences and also evaluated the impact of various suggestive techniques. We have learned much about the conditions that are likely to promote reliable testimony from children and, conversely, when we might have cause for concern about the veracity of their reports. We highlight here some methodological and translational issues that have plagued the field and suggest some areas for future research focus.

Wilcock, R., Crane, L., Hobson, Z., Nash, G., Kirke-Smith, M., & Henry, L. A. (2019). [Eyewitness identification in child witnesses on the autism spectrum](#). *Research in Autism Spectrum Disorders, 66*, 101407. DOI:10.1016/j.rasd.2019.05.007

Although there is increasing interest in the capabilities of children with autism at different stages of the criminal justice process, there is little research into how well this group perform when asked to identify perpetrators from identification lineups. This is despite theoretical and empirical literature suggesting that autistic children experience face recognition memory difficulties. As part of a broader study into eyewitness memory skills, 50 children with autism and 162 children with typical development (TD) (all with IQs > 69) watched a mock crime event (either live or on a video) involving two male perpetrators. One week later, their eyewitness identification skills were compared, with children asked to identify the perpetrators from two ecologically valid video lineups. The children were also assessed on a standardised face memory task. When asked to identify perpetrators

in the video lineups, in many respects the autistic children performed at an equivalent level to the TD children. This was despite the TD children outperforming the autistic children on the standardized face memory task. These preliminary findings suggest that group differences between autistic and TD children may not always emerge on an ecologically valid, real world eyewitness identification lineup task, despite autistic children showing poorer performance on a standardized face memory task. However, as identification performance in both groups was low, it remains important for future research to identify how to scaffold eyewitness identification performance in both children with and without an autism diagnosis.

Calado, B., Otgaar, H., & Muris, P. (2018). [Are children better witnesses than adolescents? Developmental trends in different false memory paradigms.](#) *Journal of Child Custody*, 15(4), 330–348. DOI:10.1080/15379418.2019.1568948

The current study compared older children's (11/12-year-olds) and adolescents' (14/15-year-olds) vulnerability to false memory creation using two different methods (i.e., the Deese/Roediger-McDermott [DRM] and memory conformity paradigms) involving neutral and negative stimuli. In line with previous research, a developmental reversal effect was found for the DRM paradigm, which means that when employing this method children displayed lower false memory levels than adolescents. However, when using the memory conformity paradigm, the opposite pattern was found, with adolescents forming fewer false memories than children. This indicates that in a co-witness context, adolescents are less prone to memory errors than children. The emotional valence of the stimuli used in both paradigms did not notably affect the production of false memories. There was no statistically significant correlation between false memories as measured by the DRM and the memory conformity paradigms. Altogether, the current study indicates that there is no single type of false memory as different experimental paradigms evoke different types of erroneous recollections. Additionally, our study corroborates past findings in the literature concerning the issue of developmental

reversal, strengthening the idea that under certain circumstances children might indeed be better witnesses than adolescents.

Wilcock, R., Crane, L., Hobson, Z., Nash, G., Kirke-Smith, M., & Henry, L. A. (2018). [Supporting child witnesses during identification lineups: Exploring the effectiveness of registered intermediaries](#). *Applied Cognitive Psychology*, 32(3), 367–375. DOI:10.1002/acp.3412

Performance at identification lineup was assessed in eighty-five 6- to 11-year-old typically developing children. Children viewed a live staged event involving 2 male actors, and were asked to identify the perpetrators from 2 separate lineups (one perpetrator- present lineup and one perpetrator-absent lineup). Half the children took part in lineups adapted by a registered intermediary (an impartial, trained professional who facilitates understanding and communication between vulnerable witnesses and members of the justice system), and half took part in “best-practice” lineups, according to the current guidance for eyewitness identification in England and Wales. Children receiving assistance from a registered intermediary (relative to children who received best-practice lineups) were more accurate in their identifications for perpetrator-present lineups, and there was some evidence that they were also more accurate for perpetrator-absent lineups. This provides the first empirical evidence for the effectiveness of registered intermediary support during identification lineups.

Bruer, K. C., Fitzgerald, R. J., Price, H. L., & Sauer, J. D. (2017). How sure are you that this is the man you saw? Child witnesses can use confidence judgments to identify a target. *Law and Human Behavior*, 41(6), 541–555. DOI:10.1037/lhb0000260

We tested whether an alternative lineup procedure designed to minimize problematic influences (e.g., metacognitive development) on decision criteria could be effectively used by children and improve child eyewitness identification performance relative to a standard identification task. Five hundred sixteen children (6- to 13-year-olds) watched

a video of a target reading word lists and, the next day, made confidence ratings for each lineup member or standard categorical decisions for 8 lineup members presented sequentially. Two algorithms were applied to classify confidence ratings into categorical decisions and facilitate comparisons across conditions. The classification algorithms produced accuracy rates for the confidence rating procedure that were comparable to the categorical procedure. These findings demonstrate that children can use a ratings-based procedure to discriminate between previously seen and unseen faces. In turn, this invites more nuanced and empirical consideration of ratings-based identification evidence as a probabilistic index of guilt that may attenuate problematic social influences on child witnesses' decision criteria.

Pozzulo, J. (2017). *The young eyewitness: How well do children and adolescents describe and identify perpetrators?* American Psychological Association.  
DOI:10.1037/14956-000

Every year, numerous crimes occur involving child eyewitnesses. In some cases, children are the only eyewitnesses, which makes them especially critical for solving the cases. But how reliable is child eyewitness evidence? This book summarizes the research on how well children can describe an event and perpetrator (which is a recall task) and how well they can identify the perpetrator in person or in photographs (which is a recognition task). It shows that although children may be less advanced in these skills than adults, they nonetheless can provide invaluable evidence. Pozzulo interprets the research in light of developmental theories, and notes practical implications for forensic investigations. In particular, the chapters highlight interviewing techniques to facilitate accurate recall and lineup techniques to facilitate accurate recognition. This book is an essential resource for all forensic investigators.

Sheahan, C. L., Pica, E., Pozzulo, J. D., & Nastasa, C. (2017). Eyewitness recall and identification abilities of adolescent and young-adults. *Journal of Applied Developmental Psychology*, 53, 86–95. DOI:10.1016/j.appdev.2017.09.008

Descriptive and identification abilities of adolescent and young-adult eyewitnesses were examined. Adolescents ( $M = 16.41$  years;  $N = 319$ ) and adults ( $M = 20.03$  years,  $N = 300$ ) viewed a videotape of a staged theft and then were asked to recall and identify the perpetrator from a target-present or target-absent lineup. Participants were shown one of five lineup procedures (i.e., simultaneous, wildcard, elimination, elimination-plus, or elimination with wildcard). Adolescents reported fewer descriptors compared to adult eyewitnesses, although the proportion of accurate descriptors was comparable. When examining identification accuracy, no age differences were found. Overall, participants were more accurate in target-absent compared to target-present lineups. When examining the data by target presence, there was a trade-off between the rate of correct identifications and correct rejections as a function of lineup procedure. The confidence-accuracy relationship and the relation between describing and identifying also are discussed.

Price, H. L., & Fitzgerald, R. J. (2016). Face-off: A new identification procedure for child eyewitnesses. *Journal of Experimental Psychology: Applied*, 22(3), 366–380. DOI:10.1037/xap0000091

In two experiments, we introduce a new “face-off” procedure for child eyewitness identifications. The new procedure, which is premised on reducing the stimulus set size, was compared with the showup and simultaneous procedures in Experiment 1 and with modified versions of the simultaneous and elimination procedures in Experiment 2. Several benefits of the face-off procedure were observed: it was significantly more diagnostic than the showup procedure; it led to significantly more correct rejections of target-absent lineups than the simultaneous procedures in both experiments; and it led to greater information gain than the modified elimination and simultaneous procedures.

The face-off procedure led to consistently more conservative responding than the simultaneous procedures in both experiments. Given the commonly cited concern that children are too lenient in their decision criteria for identification tasks, the face-off procedure may offer a concrete technique to reduce children's high choosing rates.

Zajac, R., & Jack, F. (2016). Improving children's performance on photographic line-ups: Do the physical properties of a 'wildcard' make a difference?. *Legal and Criminological Psychology*, 21(2), 358-371. DOI:10.1111/lcrp.12075

Children's performance on target-absent photographic line-ups may improve when they have the option of pointing to a wildcard – a photo of a silhouetted figure with a question mark superimposed. We investigated whether the wildcard's physical properties influence its success. Children (7–11 years, N = 237) briefly saw one of two confederates during a staged event; 1–2 days later, they completed either a target-present or target-absent line-up task. Within each condition, children either saw a wildcard with a plausible silhouette (i.e., consistent with the silhouette of the target), a wildcard with an implausible silhouette (i.e., inconsistent with the silhouette of the target), a wildcard with no silhouette (i.e., a question mark only), or no wildcard. Wildcard condition did not influence children's target-present performance. On target-absent line-ups only the plausible wildcard increased children's accuracy above that of children in the no wildcard control condition. The wildcard may only be successful to the extent that its silhouette is a plausible representation of the target. Possible explanations for this outcome and implications for using wildcards in investigative practice are discussed.

Fitzgerald, R. J., & Price, H. L. (2015). Eyewitness identification across the life span: A meta-analysis of age differences. *Psychological Bulletin*, 141(6), 1228–1265.  
DOI:10.1037/bul0000013

Lineup identifications are often a critical component of criminal investigations. Over the past 35 years, researchers have been conducting empirical studies to assess the impact of witness age on identification accuracy. A previous meta-analysis indicated that children are less likely than adults to correctly reject a lineup that does not contain the culprit, but children 5 years and older are as likely as adults to make a correct identification if the culprit is in the lineup (Pozzulo & Lindsay, 1998). We report an updated meta-analysis of age differences in eyewitness identification, summarizing data from 20,244 participants across 91 studies. Contrary to extant reviews, we adopt a life span approach and examine witnesses from early childhood to late adulthood. Children's increased tendency to erroneously select a culprit-absent lineup member was replicated. Children were also less likely than young adults to correctly identify the culprit. Group data from culprit-absent and culprit-present lineups were used to produce signal detection measures, which indicated young adults were better able than children to discriminate between guilty and innocent suspects. A strikingly similar pattern emerged for older adults, who had even stronger deficits in discriminability than children, relative to adults. Although identifications by young adults were the most reliable, identifications by all witnesses had probative value.

Havard, C. (2014). [Are children less reliable at making visual identifications than adults? A review.](#) *Psychology, Crime & Law*, 20(4), 372–388  
DOI:10.1080/1068316X.2013.793334

The current paper reviews research that has investigated developmental differences in lineup identification. A wealth of studies have shown that children can be as accurate as adults when making a correct identification from a target present lineup (TP), however children are more inclined to choose and thereby make a false identification from a

target absent (TA) lineup, as compared to adults. The literature reviewed, suggests that the disparity between children's and adult's performances on TA lineups is due to children being unable to resist the social demands to choose someone from a lineup and/or the need to give a positive response. Employing a silhouette within a lineup, that can be chosen if the target is not recognised, appears to be the most successful technique for reducing false identifications made by child witnesses. Including a silhouette as a part of a lineup, along with the lineup administrator being attired in casual clothing, rather than a uniform, are two simple measures that could make child witness identification evidence more reliable.

Humphries, J. E., Holliday, R. E., & Flowe, H. D. (2012). [Faces in motion: Age-related changes in eyewitness identification performance in simultaneous, sequential, and elimination video lineups](#). *Applied Cognitive Psychology*, 26(1), 149-158.  
DOI:10.1002/acp.1808

The identification performance of children (5 to 6 years, n = 180; 9- to 10- years, n = 180) and adults (n = 180) was examined using three types of video lineup procedures: simultaneous, sequential and elimination. Participants viewed a videotaped staged theft and then attempted to identify the culprit from a target-present or target-absent video lineup. Correct identifications in simultaneous and elimination video lineups did not differ as a function of age. The sequential video lineup was associated with a reduction in correct identifications for both child groups compared to adults. With respect to the target-absent lineup condition, the video elimination lineup was associated with an increase in correct rejection rates for adult witnesses. Age was also significantly associated with accuracy. Differences in correct rejection rates were observed between adults and children and also between the two child groups. Implications and future directions are discussed.



Rhodes, M. G., & Anastasi, J. S. (2012). The own-age bias in face recognition: A meta-analytic and theoretical review. *Psychological Bulletin*, 138, 146–174.  
DOI:10.1037/a0025750

A large number of studies have examined the finding that recognition memory for faces of one's own age group is often superior to memory for faces of another age group. We examined this own-age bias (OAB) in the meta-analyses reported. These data showed that hits were reliably greater for same-age relative to other-age faces ( $g = 0.23$ ) and that false alarms were reliably less likely for same-age compared with other-age faces ( $g = -0.23$ ). Further meta-analyses of measures of signal detection demonstrated that, although no difference in response criterion was evident ( $g = -0.01$ ), discriminability was reliably better for same-age compared with other-age faces ( $g = 0.37$ ). As well, children, younger adults, and older adults exhibited superior discriminability for same-age compared with other-age age faces. Thus, the OAB appears to be a robust effect that influences the accuracy of face recognition. Theoretical accounts of the OAB have generally suggested that it reflects more extensive, recent experiences with one's own age group relative to other-age groups. Additional analyses were supportive of this account as the OAB was present even for groups (e.g., older adults) that had prior experiences as members of another age group. However, the most comprehensive account of the OAB will also likely invoke mechanisms suggested by social-cognitive theories. (PsycINFO Database Record (c) 2016 APA, all rights reserved)

Karageorge, A., & Zajac, R. (2011). Exploring the effects of age and delay on children's person identifications: Verbal descriptions, lineup performance, and the influence of wildcards. *British Journal of Psychology*, 102(2), 161–183.  
DOI:10.1348/000712610X507902

We explored the effects of age and retention interval on several measures of children's person identification ability: verbal descriptions, lineup performance, and the success of a 'wildcard'— a photo of a silhouetted figure with a large question mark superimposed — in reducing children's tendency to choose from target-absent lineups. Children aged 5–7

years (N= 101) and 8–11 years (N= 109) were briefly exposed to an experimental confederate during a staged event. Either 1–2 days or 2 weeks later, children described the confederate and were then presented with either a target-present or -absent lineup. Within each group, approximately half of the children were presented with a wildcard and half were not. Target-present lineup performance improved as age increased. Compared to control children, children in the wildcard condition were more likely to correctly reject the target-absent lineup, and less likely to identify the innocent suspect. The wildcard did not influence children's target-present lineup accuracy, nor did delay exert an influence on any of our measures of lineup performance. These findings extend our knowledge of children's person identifications, as well as providing further support for the use of wildcards in photographic lineups.

Pozzulo, J. D., Dempsey, J., & Crescini, C. (2009). Preschoolers' person description and identification accuracy: A comparison of the simultaneous and elimination lineup procedures. *Journal of Applied Developmental Psychology, 30*, 667–676. DOI:10.1016/j.appdev.2009.01.004

Preschoolers' (3- to 6-year-olds) person description and identification abilities were examined using the simultaneous and elimination lineup procedures. Participants (N = 100) were exposed to a 20-minute mask-making session conducted by a female confederate who acted as the mask-making teacher. After a brief delay (20 min), participants were asked to provide descriptions of the teacher through free recall and attempt an identification using one of the lineup procedures. Both target-present and -absent lineups for each procedure were used. Preschoolers' reported an average of 1.57 person descriptors with a 60% accuracy rate. In target-present lineups, identification accuracy did not vary as a function of lineup procedure although there was a trend for a higher correct identification rate with the elimination procedure compared to the simultaneous procedure. In target-absent lineups, the elimination procedure resulted in a significantly higher correct rejection rate compared to the simultaneous procedure.

Thus, the elimination lineup procedure has been demonstrated as an effective lineup identification procedure for reducing false positive identifications with preschoolers and possibly increasing correct identifications compared to the more traditional simultaneous procedure.

Pozzulo, J. D., Dempsey, J. L., Crescini, C., & Lemieux, J. M. T. (2009). Examining the relation between eyewitness recall and recognition for children and adults. *Psychology, Crime & Law*, 15(5), 409–424. DOI:10.1080/10683160802279625

Across two studies, participants watched a videotaped, staged theft and then provided free-recall descriptions of the perpetrator and crime. Recognition was tested using a simultaneous lineup task. In both studies, children recalled fewer crime and perpetrator details than adults. However, children were not less accurate in their recall compared to adults. Across both studies, no evidence was present that witnesses who made accurate lineup identification decisions recalled more information than witnesses who made inaccurate identification decisions. Also, there was no evidence that witnesses who made accurate identification decisions were more likely to be accurate in their recall than witnesses who made inaccurate identification decisions.

Zajac, R., & Karageorge, A. (2009). The wildcard: A simple technique for improving children's target-absent lineup performance. *Applied Cognitive Psychology*, 23(3), 358–368. DOI:10.1002/acp.1511

We attempted to increase children's willingness to reject target-absent lineups by making identification and rejection response procedures highly comparable. Eight- to eleven-year-old children (N = 159) were briefly exposed to a confederate in the context of a staged event, and 24–48 hours later completed either a target-present or target-absent photographic lineup task. Within each lineup condition, children were either told to tell the experimenter if the target was not present (control condition) or provided with an

additional photograph of a silhouetted figure with a large question mark superimposed (wildcard condition), and asked to point to this photograph if the target was not present. The wildcard increased children's accuracy on the target-absent lineup without affecting their target-present performance. In fact, performance was increased to a point at which target-absent and target-present accuracy did not differ significantly. These findings offer a promising, easily-implemented intervention for reducing children's eyewitness identification errors.

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.  
DOI:10.1080/10683160701391307

The present study investigated whether children would exhibit the weapon focus effect that has been demonstrated with adult eyewitnesses. Participants (4- and 5-year-olds, 7- and 8-year-olds, and adults) watched a videotape in which a target individual portraying one of two schema roles and holding either a weapon or a neutral object steals some money. Witnesses of all ages described the target's physical appearance less accurately if the target held an object that was inconsistent rather than consistent with his schema role. Additionally, there were age effects for both accuracy and amount of information reported. The results indicate that the weapon focus effect generalizes to child witnesses and that it probably occurs because weapons are inconsistent with an activated schema.

Keast, A., Brewer, N., & Wells, G. L. (2007). Children's metacognitive judgments in an eyewitness identification task. *Journal of Experimental Child Psychology*, 97(4), 286–314. DOI:10.1016/j.jecp.2007.01.007

Two experiments examined children's metacognitive monitoring of recognition judgments within an eyewitness identification paradigm. A confidence–accuracy (CA)

calibration approach was used to examine patterns of calibration, over-/underconfidence, and resolution. In Experiment 1, children (n = 619, mean age = 11 years 10 months) and adults (n = 600) viewed a simulated crime and attempted two separate identifications from 8-person target-present or target-absent lineups given lineup instructions that manipulated witnesses choosing patterns by varying the degree of social pressure. For choosers, but not nonchoosers, meaningful CA relations were observed for adults but not for children. Experiment 2 tested a guided hypothesis disconfirmation manipulation designed to improve the realism of children's metacognitive judgments. Children (N = 796, mean age = 11 years 11 months) in experimental and control conditions viewed a crime and attempted two separate identifications. The manipulation had minimal impact on the CA relation for choosers and nonchoosers. In contrast to adults, children's identification confidence provides no useful guide for investigators about the likely guilt or innocence of a suspect. These experiments revealed limitations in children's metacognitive monitoring processes that have not been apparent in previous research on recall and recognition with younger children.

Ross, D. F., Marsil, D. F., Benton, T. R., Hoffman, R., Warren, A. R., Lindsay, R. C. L., & Metzger, R. (2006). Children's susceptibility to misidentifying a familiar bystander from a lineup: When younger is better. *Law and Human Behavior*, 30(3), 249-257.  
DOI:10.1007/s10979-006-9034-z

Children from 5 to 12 years of age (N=779) were shown a videotape where a preschool teacher has money stolen from her wallet. Children were shown a lineup, and for children in the bystander condition, the lineup contained a familiar bystander without the thief. Children in the control condition viewed the same lineup but they had not seen the bystander in the videotape. Among the 11-12-year olds, participants in the bystander condition were significantly more likely than control participants to misidentify the familiar bystander. This effect was not found in children from 5 to 10 years of age. When children in the control condition were shown a lineup that contained the thief without the

bystander, the 11–12-year olds were significantly more likely than the younger children to correctly identify the thief. These findings demonstrate that age can both increase and decrease the accuracy of children’s lineup identification accuracy depending on the task at hand and the content of a lineup.

Freire, A., Lee, K., Williamson, K. S., Stuart, S. J., & Lindsay, R. C. L. (2004). [Lineup identification by children: Effects of clothing bias](#). *Law and Human Behavior*, 28(3), 339–354. DOI:10.1023/b:lahu.0000029142.00834.e3

This study examined effects of clothing cues on children's identification accuracy from lineups. Four- to 14-year-olds (n = 228) saw 12 video clips of individuals, each wearing a distinctly colored shirt. After watching each clip children were presented with a target-present or target-absent photo lineup. Three clothing conditions were included. In 2 conditions all lineup members wore the same colored shirt; in the third, biased condition, the shirt color of only one individual matched that seen in the preceding clip (the target in target-present trials and the replacement in target-absent trials). Correct identifications of the target in target-present trials were most frequent in the biased condition, whereas in target-absent trials the biased condition led to more false identifications of the target replacement. Older children were more accurate than younger children, both in choosing the target from target-present lineups and rejecting target-absent lineups. These findings suggest that a simple clothing cue such as shirt color can have a significant impact on children's lineup identification accuracy.

Pezdek, K., Blandon-Gitlin, I., & Moore, C. (2003). [Children's face recognition memory: More evidence for the cross-race effect](#). *Journal of Applied Psychology*, 88(4), 760–763. DOI:10.1037/0021-9010.88.4.760

It is well established that own-race faces are recognized more accurately than cross-race faces. However, there are mixed results regarding the developmental consistency of

the cross-race effect. White and Black kindergarten children, 3rd graders, and young adults viewed a Black and a White target individual. One day later, recognition memory for each target was tested with a 6-person lineup. The interaction of race of participant by race of target face on Ag scores was significant, demonstrating an overall cross-race effect. The 2nd-order interaction with age did not approach significance: for each age group, own-race identification was more accurate than cross-race identification. The age consistency of the cross-race effect in light of the significant main effect of age suggests quantitative but not qualitative differences in face memory processing at various ages. For children, as well as adults, own-race faces are recognized more accurately than cross-race faces.

Parker, J. F., & Myers, A. (2001). Attempts to improve children's identifications from sequential-presentation lineups. *Journal of Applied Social Psychology*, 31(4), 796-815. DOI:10.1111/j.1559-1816.2001.tb01414.x

The effectiveness of practice and stringent lineup instructions in improving children's identifications from sequential-presentation lineups was investigated. Elementary school children (N= 144) viewed a slide sequence of a crime followed by practice or control procedures. In the practice conditions, children either practiced themselves (self) or watched a videotape of a child practicing (modeled). Practice consisted of 2 target-absent lineups (unmixed) or a target-absent lineup and a target-present lineup (mixed) of female photos unrelated to the crime. The control conditions did not engage in identification practice. All witnesses were given stringent instructions for identifying the criminal from target-present or target-absent sequential-presentation lineups. Multiple responding was dramatically reduced. Practice affected gender differentially. Female children increased in correct identifications, whereas male children increased in false rejections. None of the practice procedures reduced foil identifications from target-absent lineups.

Pozzulo, J. D., & Lindsay, R. C. L. (1999). Elimination lineups: An improved identification procedure for child eyewitnesses. *Journal of Applied Psychology, 84*(2), 167–176. DOI:10.1037/0021-9010.84.2.167

Elimination lineup procedures were proposed that required the witness to eliminate all but 1 lineup member before being asked if the remaining lineup member was the criminal. Elimination lineups were designed and tested with the aim of reducing false-positive choices by child eyewitnesses (n = 587 children, 10–14 years, M = 12 years; n = 185 adults). Elimination lineups decreased false-positive responding in children without significantly reducing correct identifications. Fast elimination lineups with modified instructions emphasizing the negative consequences of identifying an innocent person and explaining how to make an absolute judgment significantly decreased children's false-positive rate to a level comparable with adults shown a simultaneous lineup. The potential benefits of elimination lineup procedures for child witnesses are discussed.

Davies, G., Tarrant, A., & Flin, R. (1989). Close encounters of the witness kind: Children's memory for a simulated health inspection. *British Journal of Psychology, 80*(4), 415–429. DOI:10.1111/j.2044-8295.1989.tb02333.x

A total of 128 children from each of two age groups (6–7 years and 10–11 years) took part individually in a simulated health check procedure. This involved direct confrontation between the child and an adult stranger in which the child was touched and an article of clothing (shoes) removed. One week later children took part in a series of tests which examined their testimony of the events in which they participated. Older children were superior to younger on both free and prompted recall of event and appearance information and made fewer errors, both relatively and absolutely, on recall of appearance but not events. The two age groups did not differ in their competence in the construction of Photofit pictures and showed no difference in performance on identification from a photographic array, irrespective of whether the adult was present or



absent. The implications of these findings for the current debate over the legal admissibility of children's evidence are discussed.

Pozzulo, J. D., & Lindsay, R. C. L. (1998). Identification accuracy of children versus adults: A meta-analysis. *Law and Human Behavior*, 22, 549–570.  
DOI:10.1023/A:1025739514042

Identification accuracy of children and adults was examined in a meta-analysis. Preschoolers (M = 4 years) were less likely than adults to make correct identifications. Children over the age of 5 did not differ significantly from adults with regard to correct identification rate. Children of all ages examined were less likely than adults to correctly reject a target-absent lineup. Even adolescents (M = 12–13 years) did not reach an adult rate of correct rejection. Compared to simultaneous lineup presentation, sequential lineups increased the child-adult gap for correct rejections. Providing child witnesses with identification practice or training did not increase their correct rejection rates. Suggestions for children's inability to correctly reject target-absent lineups are discussed. Future directions for identification research are presented.

Gross, J., & Hayne, H. (1996). Eyewitness identification by 5- to 6-year-old children. *Law and Human Behavior*, 20(3), 359–373. DOI:10.1007/BF01499028

Thirty-four 5- to 6-year-old children participated in a unique event in which children interacted with 4 individuals--2 for a long period of time and 2 for a brief period only. Each child was interviewed 1 to 2 days later with photographic lineups that contained the target individuals (target-present or with lineups that did not (target-absent. When tested with target-present lineups, 5- to 6-year-old children were very accurate in identifying individuals with whom they had prolonged exposure, and were also accurate when asked to identify an individual who was present only briefly, but who was part of a salient aspect of the same event. In contrast, when tested with target-absent lineups, children's

performance was very poor regardless of whether the to-be-identified individual had been seen briefly or for a prolonged period of time. These data have important implications for eyewitness identification by young children in clinical and legal settings.

Parker, J. F., & Carranza, L. E. (1989). Eyewitness testimony of children in target-present and target-absent lineups. *Law and Human Behavior, 13*(2), 133-149.  
DOI:10.1007/BF01055920

The effects of age of witness and age of suspect on eyewitness testimony were investigated. Forty-eight elementary school children and 48 college students viewed a slide sequence of a mock crime. This was followed by target-present or target-absent photo identification with a no-choice option, central and peripheral questions related to the crime, and a second photo identification. In photo identification, child witnesses had a higher rate of choosing than adult witnesses, suggesting that children have more lax criteria of responding. The accuracy data showed similar levels of sensitivity across ages although there was a trend toward reduced accuracy of child witnesses in target-absent lineups. All witnesses made more total choices and more correct rejections with child-suspect lineups than adult-suspect lineups. Central questions were answered better than peripheral questions by both age groups, but adults made significantly more "don't know" choices.