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The efficacy of the Self-Administered Interview: A systematic review

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Abstract

Obtaining accurate information from eyewitnesses is a crucial element in criminal investigations. Interview strategies such as the Cognitive Interview (CI) and the Self-Administered Interview (SAI) have been developed and implemented to minimise inaccuracies and enhance the recall and reliability of eyewitness evidence. The SAI is a recent development within forensic psychology. However, a question remains as to the effectiveness of the SAI as an investigative interview tool. A systematic review of published studies employing the SAI was conducted (n = 22), and all were considered in relation to three variables (estimator, system and methodological). As the number of studies within the evidence base was relatively small, we could not ascertain whether the SAI is an effective investigative interviewing tool. However, the results demonstrate a number of positive benefits of the SAI. We discuss the implications of these findings for policy and directions for future research.

KEYWORDS
eyewitness memory, eyewitness testimony, investigative interviewing, self-administered interview, systematic review

1 | INTRODUCTION

The criminal justice system relies heavily on eyewitness testimony for investigating and prosecuting crimes. Current eyewitness interviews that are undertaken by the police involve eyewitnesses establishing basic details of a criminal incident during a brief initial interview immediately following the event. After this initial interview, eyewitnesses will often experience a lengthy delay before providing a full account of the event. As memory is highly fallible, this interval may contribute to memory distortions or decay (Gabbert et al., 2009; Loftus, 1979). The Cognitive Interview (CI, Geiselman et al., 1984) and the Self-Administered Interview (SAI, Gabbert et al., 2009) were developed to elicit a detailed accurate report from an eyewitness. Although the CI is an established investigative tool, the SAI is a more recent adaptation (Gabbert et al., 2009), and the following review aimed to clarify the value of the SAI in regards to witness accuracy, enhancing memory retention and reducing susceptibility to misinformation. This paper will systematically review published studies that examine the effectiveness of the SAI and consider them in relation to three variables, specifically estimator variables (i.e. factors that cannot be controlled by the justice system), system variables (i.e. factors that are controlled by the justice system) and methodological variables (i.e. differences in methodological approaches to the implementation of the tool).

1.1 | The Self-Administered Interview (SAI)

The SAI was initially designed as a tool to enable investigators to gather a full and detailed report from eyewitnesses in the initial stages of witnessing a crime, without the need for a trained interviewer (Gabbert et al., 2009). The SAI comprises five sections that contain information and instructions designed to elicit accurate memory recall for a witnessed event (Gabbert et al., 2009). Section 1 guides the witness to picture the physical (i.e. where the witness was located) and personal context (i.e. what the witness was thinking and how they were feeling) when the initial event was witnessed. Section 2 asks witnesses to report a complete and accurate account of the incident, including the sequence of actions and events, and the people that were involved. Witnesses are advised to not guess about any details they do not remember and to complete the reporting process without the assistance of others. Both Sections 1 and 2 are components of the CI (Geiselman et al., 1984). Section 3 focuses on gaining detailed descriptions of the offender involved in the event. Specifically, witnesses are asked to provide as much detail as possible, without guessing, about the offender's appearance (e.g. clothing, tattoos, hair colour, gender, etc.). Section 3 also contains a diagram of a human figure and writing space if witnesses wish to add any further information relating to the appearance of the offender. Section 4 of the SAI asks witnesses to provide a sketch of the scene to aid in recall and to preserve any additional spatial details, this may prompt further recollection of information about the incident that may not have already been reported. Finally, Section 5 contains specific questions that may have not been considered in a previous recall. These questions relate to providing descriptions of any other potential witnesses to the crime, details concerning any vehicles present (e.g. colour and registration) and providing information about the viewing conditions at the scene of the crime (e.g. time of day and weather conditions).

Initial tests of the SAI are promising and suggest that it has the potential to be an effective tool for collecting high-quality and accurate information from eyewitnesses (Gabbert et al., 2009). Within this initial research, participants using the SAI reported more correct details than participants who provided a free recall (FR) account and performed at the same level as participants who provided their recall using the CI (Gabbert et al., 2009). Multiple studies that have been conducted since this initial research have also found that the SAI produced more or equal levels of accurate recall in comparison to other reporting methods (Matsuo & Miura, 2017; McPhee et al., 2014; Miura & Matsuo, 2021).

The SAI also has the potential to protect eyewitnesses' memory from decay and distortion during the time interval between an event and a subsequent interview (Gabbert et al., 2009). Gabbert et al. (2009) found that

participants who initially completed the SAI recalled significantly more correct details on a future retrieval attempt (following a 1-week delay) than participants who had only provided a FR account. Subsequent research has provided similar findings with the SAI producing more correct details following a delay when compared with less structured types of memory reports (Chevroulet et al., 2021; Gabbert et al., 2012; Matsuo & Miura, 2017). Furthermore, the SAI has also been found to reduce the 'misinformation effect' (Gabbert et al., 2012), that is the distortion of recall memory after eyewitnesses are exposed to incorrect post-event information (Gittins et al., 2015; Loftus et al., 1978; Mackay & Paterson, 2015; McPhee et al., 2014; Paterson et al., 2015).

As the SAI (Gabbert et al., 2009) is a recent development in forensic psychology, there are a limited number of studies that have examined various factors that influence its effectiveness, such as stress (Krix et al., 2016), developmental disorders (Maras et al., 2014) and witness age (Dando et al., 2020; Gawryłowicz et al., 2014b). A recent meta-analysis (Horry et al., 2021) addressed factors that influenced the effectiveness of the SAI. The findings generally suggest that the age of the participant is not a significant moderator for accuracy in initial or subsequent accounts of the SAI. However, it was suggested that memory reports for older adults may benefit more from an initial SAI than younger adults in reducing the number of incorrect details reported (Horry et al., 2021). Horry et al. (2021) also considered the delay between the SAI and subsequent recall and found that participants reported more correct details in an initial SAI than in an initial FR account. However, this increase in correct details was also accompanied by a small increase in incorrect details resulting in a 90% absolute accuracy rate for the SAI. More importantly, it was found that information recalled later was more detailed and accurate if the witness had completed an initial SAI in comparison to a witness who had not completed a prior retrieval attempt (Horry et al., 2021). The effect size for accuracy on subsequent recall attempts was larger when other factors were considered such as participant population, event modality and the comparison recall test used in initial and subsequent accounts (Horry et al., 2021). Findings suggest that one significant moderator for the number of correct details in initial accounts was related to the type of recall used in the control group. The number of correct details when comparing the SAI to a FR condition was higher than the number of correct details comparing the SAI to a structured recall condition.

Building on the findings from Horry et al. (2021), we examine whether the SAI is an effective investigative interview tool for obtaining accurate testimony, enhancing memory retention and reducing susceptibility to misinformation. We will provide an up to date review including literature published since 2021 and additional variables not considered within the original meta-analysis, specifically, eyewitnesses with developmental disabilities. Developmental disabilities are an important factor to consider in examining the effectiveness of the SAI as witnesses with developmental disabilities often have specific difficulties with their memory (Maras et al., 2014). This can significantly impact on the ways in which they perceive and interpret a witnessed event and impact their ability to provide evidence (Maras et al., 2014). Such memory difficulties can usually be diminished if more retrieval support, in the form of cued instructions, can be provided to the witness (Bowler et al., 2004). Therefore, it is useful to consider whether the instructions provided in the SAI enhance recall amongst witnesses with developmental disabilities.

We also considered additional system variables, with a specific focus on the duration between the event, SAI, and any subsequent account. Although Horry et al. (2021) considered duration in the form of more or less than 1 week, this review will consider individual timeframes ranging from 24 h to 1 month. This will establish a timeframe for administering the SAI for optimal effectiveness. Additional methodological variables were also considered, including the approach used to code data such as coding each piece of information as an Action, Person, Object, or Setting detail or using single accuracy coding. Examining results using Action, Person, Object, and Setting details can provide a more precise account of performance on the SAI than a singular score and highlight which types of information eyewitnesses tend to recall more (Wright & Holliday, 2007). Individual elements of the SAI (i.e. the sketch element) and the effect on recall was another methodological variable considered as part of this review. By isolating the sketch component, it can provide an understanding of how eyewitnesses reinstate the context of an event using visual imagery and the integration of this information into long-term memory for future recall (Wammes et al., 2019). The methodological variable of post-event misinformation was also reviewed. Although the

presence of post-event misinformation was considered by Horry et al. (2021), our review considers when the SAI should be utilised so to reduce the misinformation effect on recall. The inclusion of these additional methodological variables can provide insight for policymakers and practitioners into how the SAI supports episodic memory (Anderson, 1983) and the circumstances most beneficial for accurate recall.

2 | METHOD

2.1 | Data sources and strategy

A systematic search for published studies was performed using Google Scholar and Bournemouth University's online interface 'MySearch.' This interface searched across a range of psychological databases and journals (*PsychINFO*, *PsychARTICLE*, *JSTOR Journals*, *Complementary Index*, *Academic Search Ultimate* and *SocINDEX)* to identify studies incorporating the SAI within the research methodology. Searches were conducted using the keywords 'SAI,' 'Eyewitness' and 'Memory.' Research published between 2009 and 2022 was considered. The year 2009 was selected as the first paper introducing the concept of the SAI, which was published that year.

2.2 | Study selection (eligibility criteria) and procedure

The PRISMA framework (Moher et al., 2009) for systematic reviews was utilised for this review (see Figure 1 for the selection procedure). All publications retrieved by Bournemouth University's online electronic database were included if they met the following criteria: (a) the article was written in English; (b) publication of the article was after 2009; (c) the article had been published in a peer-reviewed journal; (d) an SAI was conducted in either its original or minimally adapted format to provide comparisons between individual sections; (e) the SAI was compared with some form of control measure either in an initial recall or delayed recall attempt and (f) dependent measures of recall were provided (quantity of correct details and accuracy).

3 | RESULTS

Following the application of the eligibility criteria to the original search, a total of 27 experimental comparisons from 22 studies were included in the systematic review. The characteristics of each study are outlined in Table 1. Significant progress investigating the efficacy of the SAI has been made since the initial introductory paper was published by Gabbert et al. (2009). The three variables (estimator, systematic, and methodological) considered as part of this systematic review will now be looked at in turn.

3.1 | Estimator variables

Table 1 shows various estimator variables amongst the synthesised studies: the participant's age, social and physiological factors such as stress and developmental disabilities. In terms of age, 19 of the included 22 studies evaluated the effectiveness of the SAI amongst an adult population (aged 18–64). Only two studies directly examined the effectiveness of the SAI in older adults, that is 65 years of age and above (Dando et al., 2020; Gawrylowicz, Memon, Scoboria, Hope, & Gabbert, 2014) and the one remaining study focused on the accuracy of the SAI amongst 11- to 12-year-old children (Af Hjelmsäter et al., 2012). There was no study that reviewed the SAI with adolescents (aged 13–17) in isolation, and therefore, this could not be compared with other samples.

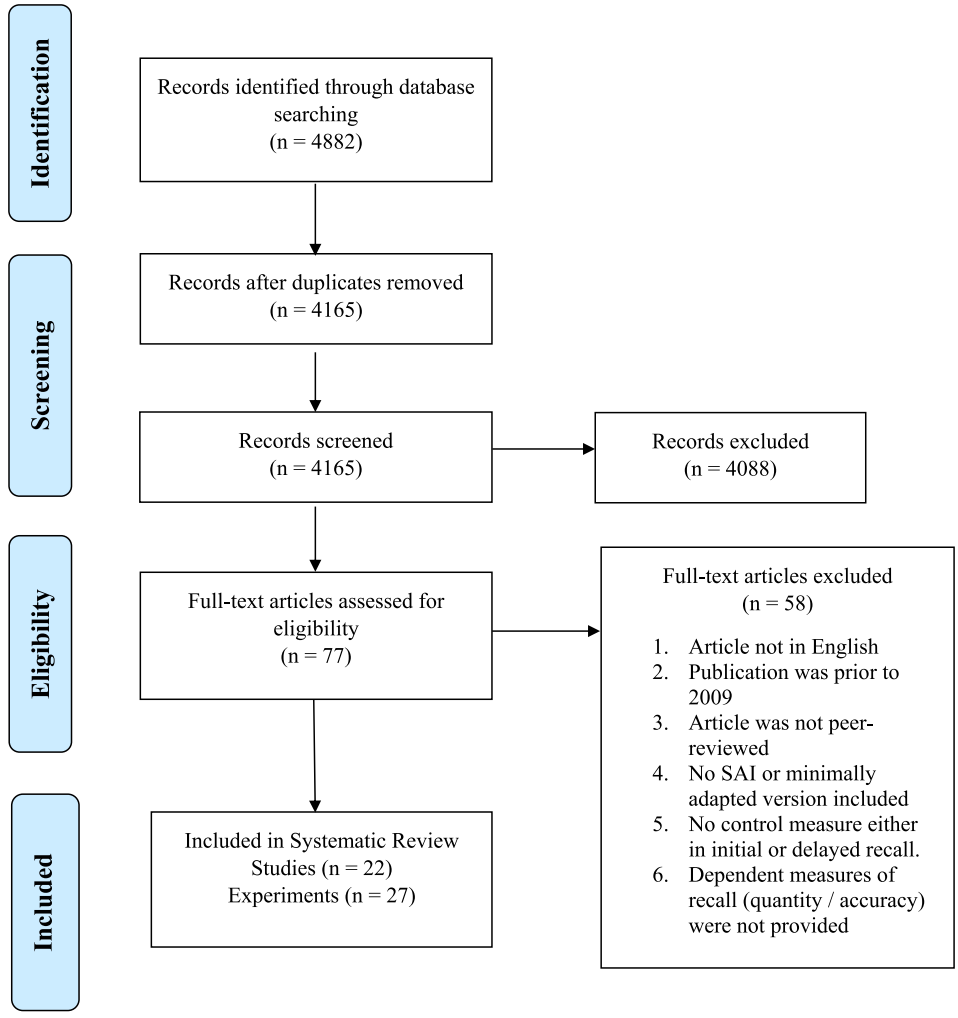

FIGURE 1 Flow diagram representing the process of identifying and screening for inclusion in the systematic review.

Effect sizes demonstrated that the SAI elicited more correct details in all age groups regardless of the comparison interview technique used (i.e. FR, CI, or an adapted version of the SAI). Unexpectedly, older adults outperformed younger adults when the SAI was administered as they reported significantly more correct details and obtained higher accuracy rates (Gawrylowicz, Memon, Scoboria, Hope, & Gabbert, 2014). This contradicts previous theories, which suggest that younger individuals have better recall (Bornstein et al., 2000) and have been attributed to motivational differences in the participants, in so far that the older adult participants were highly motivated to volunteer with many travelling long distances to undertake the study. This was in direct comparison to the younger adult group, which mainly consisted of students, who the authors believed might have been less motivated to perform well on tasks (Gawryłowicz et al., 2014b). Despite this, older adults benefited from using the SAI in comparison to written FR as it enabled them to create transferable skills that could be used to recall events in the future. Specifically, the SAI can assist older adults to regulate their memory qualitatively; thus, it may be enhanced quantitatively.

TABLE 1 Characteristics of studies included within systematic review.

	Authors	Experiment	Sample	Interview	Immediate/ Delay	Additional measures	Data coding	Results	
								Time 1	Time 2
1	Af Hjelmsater, Stromwall and Granhag (2012)	1	194 children (95 girls and 99 boys, aged 11–12 years) recruited from local schools in Gothenburg, Sweden	SAI open (standard free recall of event) SAI structured (Gabbert et al., 2009)	Immediate (T1) Delay (T2): Two weeks	Social influence (T2)	Action, object, person, setting coding principle	Quantity of detail: SAI (M = 21.65) versus control (M = 18.86), d = 0.33, $p < 0.05$ SAI structured (M = 23.46) versus SAI open (M = 19.88), d = 0.36, $p < 0.01$ Accuracy of detail: SAI (M = 19.65) versus Control (M = 16.98), d = 0.36, $p < 0.01$ SAI structured (M = 21.02) versus SAI open (M = 18.30), d = 0.32 and $p < 0.05$	Quantity of detail: Interview format was not significant-F (2, 190) = 0.23, p = 0.80, and n^2 = 0.002. Accuracy of detail: Interview format was not significant-F (2, 190) = 0.11, p = 0.89 and n^2 = 0.001. Social influence Interaction effect was not significant - F (2, 187) = 0.43, p = 0.66 and n^2 = 0.01.
2	Chevroulet, Paterson, Yu and Chew and Kemp (2021)	1	80 adults (50 females and 30 males, average age of M = 34.90 years) recruited via an online experiment registration system	SAI No SAI Free recall questionnaire (T2)	Immediate (T1) Delay (T2): 24 h; 1 week	Misleading postevent information (PEI)	Single accuracy scoring	Accuracy of detail: Imm-SAI (M = 66.30) versus 24h-SAI (M = 67.00) versus week-SAI (M = 51.50), F (1, 60) = 6.83 and p = 0.011	Accuracy of detail: Imm-SAI (M = 53.91), versus No SAI (M = 41.29) F (1, 76) = 4.91, p = 0.030 24h-SAI (M = 62.00) versus week-SAI (M = 48.65) F (1, 76) = 2.36, p = 0.129. Susceptibility to misinformation: Imm-SAI (M = 0.67) versus 24h-SAI (M = 0.78) versus week-SAI (M = 0.63) versus No SAI (M = 0.82), F (3, 76) = 0.17, p = 0.915.
		2	160 adults (82 females, 78 males and average age of M = 33.71 years) recruited via an online experiment registration system	SAI No SAI Free recall questionnaire (T2)	Immediate (T1) Delay (T2): 24 h, 1 week, 2 weeks and 1 month	Misleading postevent information (PEI)	Single accuracy scoring		Accuracy of detail: SAI (M = 59.30) versus No SAI (M = 44.83), F (1, 152) = 17.17 and p = < 0.001. Susceptibility to misinformation: SAI (M = 0.74) versus No SAI (M = 0.59) F (1, 152) = 1.01 and p = 0.317

TABLE 1 (Continued)

	Authors	Experiment	Sample	Interview	Immediate/ Delay	Additional measures	Data coding	Results	
								Time 1	Time 2
3	Dando et al. (2020)	1	134 older adults (51 males and 83 females, aged 65–88 years) recruited from the local community	SAI Free recall (mental/sketch reinstatement) (T2)	Immediate (T1) Delay (T2): 48 h	None	Single accuracy scoring	Accuracy of detail: SAI (M = 91.79) versus No SAI (M = 85.71), F (1, 128) = 68.244 and $p < 0.001$.	Accuracy of detail: Mental reinstatement (M = 87.16) versus sketch reinstatement (M = 92.67), F (2, 128) = 28.942 and $p < 0.001$
4	Gabbert et al. (2009)	1	55 adults (33 males and 22 females, aged 18–40 years) recruited from a local university.	SAI Cognitive interview (CI) Written free recall (FR)	Immediate (T1)	None	Action, object, person, setting coding principle	Accuracy of detail: SAI (M = 0.89) versus CI (M = 0.93) versus FR (M = 0.91), F (2,52) = 5.34, p = 0.008 and n^2 = 0.17 Person details: SAI (M = 0.86) versus CI (M = 0.91) versus FR (M = 0.90), F (2, 52) = 20.88, $p < 0.001$ and n^2 = 0.45 Action details: SAI (M = 0.95) versus CI (M = 0.97) versus FR (M = 0.92), F (2, 52) = 17.52, $p < 0.001$ and n^2 = 0.40 Setting details: SAI (M = 0.97) versus CI (M = 0.99) versus FR (M = 0.96), F (2, 52) = 17.27, $p < 0.001$ and n^2 = 0.40 Object details: SAI (M = 0.90) versus CI (M = 0.94) versus FR (M = 0.89), F (2, 52) = 4.51, $p < 0.02$ and n^2 = 0.15	
		2	42 adults (32 females and 10 males aged 30–60 years) recruited from local civic offices.	SAI	Delay (T2): One week	None	Action, object, person, setting coding principle		Accuracy of detail: SAI (M = 0.93) versus control (M = 0.88), F (1, 40) = 9.29, p = 0.004 and n^2 = 0.19 Person details: SAI (M = 0.93) versus control (M = 0.86), F (1, 40) = 9.04, p = 005 and n^2 = 0.18 Action details: SAI (M = 0.96)

(Continues)

TABLE 1 (Continued)

	Authors	Experiment	Sample	Interview	Immediate/ Delay	Additional measures	Data coding	Results	
								Time 1	Time 2
									versus control (M = 0.89), F (1, 40) = 6.14, p = 0.018 and n^2 = 0.13 Setting details: SAI (M = 1.00) versus control (M = 0.94) and no difference between conditions Object details: SAI (M = 0.90) versus control (M = 0.89), no difference between conditions
5	Gabbert et al. (2012)	1	40 adults (23 females and 17 males aged 18–45 years) recruited from local civic offices.	SAI Written free recall (FR; control)	Delay (T2): One week	Misleading postevent information (PEI)	Action, object, person, setting coding principle		Accuracy of detail: SAI (M = 0.96) versus control (M = 0.95), t (38) = 0.82 and p = 0.42. Susceptibility to misinformation: SAI (M = 0.30) versus control (M = 0.80), t (38) = 2.21, p = 0.017 and d = 0.70.
		2	62 adults (49 females and 13 males, aged 18–40 years) recruited through local civic offices and businesses	SAI Delayed recall test (20 cued recall questions and four misleading questions regarding event; control)	Delay (T2): three weeks	Misleading postevent information (PEI)	Single accuracy scoring		Accuracy of detail: SAI (M = 0.78) versus control (M = 0.65), t (60) = 3.11, p = 0.003 and d = 0.79 Susceptibility to misinformation: SAI (M = 2.07) versus control (M = 3.69), t (60) = 1.88, p = 0.03 and d = 0.48.
6	Gabbert et al. (2022)	1	88 participants (72 females and 16 males, average age of M = 31.18 years) recruited from the local community.	SAI (paper, mobile and computer) Spoken free recall (SFR; T2)	Immediate (T1) Delay (T2): One week	Digital usage and user experience	Single accuracy scoring	Accuracy of detail: Paper SAI (M = 19.74) versus mobile SAI (M = 19.69), versus Computer SAI (M = 20.26), H (2) = 0.02 and p = 0.99	Accuracy of detail: Paper SAI (M = 20.90) versus mobile SAI (M = 21.23) versus computer SAI (M = 18.00), F (2,85) = 1.26, p = 0.29 and np^2 = 0.03
		2	75 participants (42 females and 33 males, average age of M = 27.35 years) recruited from local community	SAI (paper and mobile) Written free recall (FR; T2)	Immediate (T1) Delay (T2): One week	Digital usage, user experience and attitudes towards mobile devices	Single accuracy scoring	Accuracy of detail: Paper SAI (M = 135.82) versus mobile SAI (M = 123.33), FR (M = 71.38), F (2,64) = 20.24, p = < 0.001 and np^2 = 0.39	Accuracy of detail: Paper SAI (M = 96.55) versus mobile SAI (M = 100.38), FR (M = 62.83), F (2,64) = 9.72, p = < 0.001 and np^2 = 0.23

TABLE 1 (Continued)

	Authors	Experiment	Sample	Interview	Immediate/ Delay	Additional measures	Data coding	Results	
								Time 1	Time 2
7	Gawryłowicz, Memon and Scoboria, (2014)	1	84 adults (50 females and 34 males, average age of $M = 22.12$ years) recruited from the general public.	SAI Written free recall (FR)	Immediate (T1) Delay (T2): One week	None	Single accuracy scoring	Accuracy of detail: SAI ($M = 96.09$) versus FR ($M = 95.68$), t (80) = 0.46, $p = 0.64$ and $r = 0.07$	Application of transferable skills: Previous experience of SAI ($M = 97.53$) versus no previous experience of SAI ($M = 95.07$), t (80) = 3.11, $p = 0.003$ and $r = 0.33$
8	Gawryłowicz, Memon, Scoboria, Hope and Gabbert (2014)	1	80 adults (53 females and 27 males, aged between 60 and 95 years) recruited through community advertisements.	SAI Written free recall (FR)	Immediate (T1) Delay (T2): One week	None	Single accuracy scoring	Quantity of detail: SAI − t (78) = 3.43, $p < 0.001$, $d = 0.77$ and 95% CI [0.31, 1.22] Accuracy of detail: SAI − t (78) = 3.21, $p = 0.002$, and $d = 0.72$ [0.26, 1.17] Accuracy of detail: Older adults ($M = 74.51$) versus younger adults ($M = 57.06$), F (1, 158) = 26.38, $p < 0.001$ and $d = 0.72$ 95% CI [0.40, 1.04] SAI ($M = 75.99$) versus FR ($M = 55.62$), F (1, 158) = 35.68, $p < 0.001$ and $d = 0.88$ [0.56, 1.20]	
		2	84 adults (50 females and 34 males, average age of $M = 22.12$) recruited from the general public. 80 adults (53 females and 27 males, aged between 60 and 95 years) recruited through community advertisements.	Statistical comparison of data from: Gawryłowicz, J., Memon, A., & Scoboria and A. (2014) Gawryłowicz, Memon, Scoboria, Hope & Gabbert (2014)	Immediate (T1) Delay (T2): One week	None	Single accuracy scoring		Application of transferable skills—quantity of detail: Previous experience of SAI − t (78) = 2.19, $p = 0.032$ and $d = 0.49$ [0.05, 0.94] Application of transferable skills—Accuracy of detail: Previous experience of SAI − t (78) = 2.17, $p = 0.033$ and $d = 0.49$ [0.06, 0.93] Application of transferable skills—accuracy of detail: Older adults ($M = 73.49$) versus younger adults

(Continues)

TABLE 1 (Continued)

	Authors	Experiment	Sample	Interview	Immediate/ Delay	Additional measures	Data coding	Results	
								Time 1	Time 2
									(M = 48.27), F (1, 157) = 60.41, p < 0.001 and d = 1.18 [0.85,1.52] SAI (M = 66.32) versus FR (M = 55.04), F (1, 157) = 12.39, p < 0.001 and d = 0.38 [0.07, 0.69]
9	Gittins et al. (2015)	1	85 adults (52 females and 33 males, average age of M = 19.56) recruited from a local university	SAI Neutral filler questions (control)	Immediate (T1)	Misleading postevent information (PEI)	Single accuracy scoring	Accuracy of detail: SAI versus Control—F (1, 75) = 4.91, p = 0.030, Hedges's g = 0.50 and 95% CI [2.92, 3.90] Resistance to misinformation: SAI versus control - F (1,75) = 8.46, p = 0.005; Hedges's g = 0.65 and 95% CI [0.45, 0.85]	
10	Hope et al. (2014)	1	60 adults (44 females and 16 males, aged between 20 and 45 years) recruited through community advertisements.	SAI Written free recall (FR) No immediate recall (control Cognitive interview (CI; T2)	Immediate (T1) Delay (T2): One week	None	Action, object, person, setting coding principle	Accuracy of detail SAI versus FR—t (26) = 6.75, p < 0.001 and d = 2.65 (correct details) SAI versus FR—t (38) = 3.82, p < 0.001 and d = 1.20 (incorrect details)	Accuracy of detail SAI versus FR—t (57) = −3.35, p < 0.001 and d = 0.89 SAI versus control—t (57) = −2.49, p = 0.02 and d = 0.66 Person details: SAI—F (2, 57) = 5.67, p < 0.01, f = 0.44 versus FR—t (57) = −3.20, p < 0.01 and d = 0.85 versus control t (57) = −2.51, p = 0.02 and d = 0.66 Setting details: SAI versus FR—t (57) = −3.76, p < 0.01 and d = 0.99, SAI versus control—t (57) = −2.80, p < 0.01 and d = 0.74 Action details: SAI versus FR—t (57) = −2.76, p < 0.01, d = 0.73, SAI versus control - t (57) = −2.15, p < 0.04 and d = 0.57 Object details: No significant

TABLE 1 (Continued)

	Authors	Experiment	Sample	Interview	Immediate/ Delay	Additional measures	Data coding	Results	
								Time 1	Time 2
									difference—F (2, 57) = 2.71, $p = 0.08$ and $f = 0.31$
11	Hudson et al. (2020)	1	128 adults (83 females and 45 males, aged between 18 and 74 years) recruited through a local university.	SAI Written free recall (FR) Structured interview (T2)	Immediate (T1) Delay (T2): One week	Deception	Action, object, person, setting coding principle	Quantity of detail: SAI versus FR = F (1, 124) = 46.04, $p < 0.001$, $f = 0.61$ and $BF_{(10)} = 5.33 \times 10^6$ Accuracy of detail: No significant differences—t (62) = 1.46, $p = 0.55$, and $BF_{(01)} = 3.37$	Quantity of detail: Truth ($M = 49.61$) versus lie ($M = 41.42$), F (1, 124) = 12.67, $p = 0.001$ and $f = 0.32$ Accuracy of detail: No significant difference in accuracy—t (62) = 0.65, $p = 0.52$ and $BF_{(01)} = 3.28$
12	Kraus et al., 2017	1	62 adults (41 females and 21 males, aged 18–67 years) recruited through online advertising	SAI Police officers questioning (PCQ) (16 open and closed ended non-suggestive questions) Written free recall (FR)	Immediate (T1) Delay (T2): One week	None	Action, object, person, setting coding principle	Accuracy of detail: Offender details—SAI ($M = 0.91$) versus PCQ ($M = 0.93$) versus FR ($M = 0.93$), $p > 0.05$. Victim details - SAI ($M = 0.90$) versus PCQ ($M = 0.96$) versus FR ($M = 0.97$), $p > 0.05$. Setting details—SAI ($M = 0.94$) versus PCQ ($M = 1.00$) versus FR ($M = 0.96$), $p > 0.05$. Object details—SAI ($M = 0.96$) versus PCQ ($M = 0.91$) versus FR ($M = 0.97$), $p > 0.05$. Action details - SAI ($M = 0.95$) versus PCQ ($M = 0.97$) versus FR ($M = 0.88$), F (2, 56) = 5.54, $p = 0.006$ and $n^2 = 0.17$	Accuracy of detail: Offender details–SAI ($M = 0.99$) versus PCQ ($M = 0.99$) versus FR ($M = 0.83$), F (2, 51) = 14.47, $p < 0.001$ and $n^2 = 0.36$ Victim details—SAI ($M = 0.71$) versus PCQ ($M = 0.84$) versus FR ($M = 1.00$), F (2, 51) = 6.71, $p = 0.003$ and $n^2 = 0.21$ Setting details—SAI ($M = 0.87$) versus PCQ ($M = 0.68$) versus FR ($M = 0.87$), $p > 0.05$. Object details—SAI ($M = 0.77$) versus PCQ ($M = 0.62$) versus FR ($M = 0.97$), F (2, 51) = 10.02, $p < 0.001$ and $n^2 = 0.28$ Action details—SAI ($M = 0.87$) versus PCQ ($M = 0.74$) versus FR ($M = 0.83$), $p > 0.05$.
13	Krix et al. (2014)	1	88 adults (65 females and 23 males, aged between 18 and 64 years) recruited through a local university and general public.	SAI Written free recall (FR)	Immediate (T1) Delay (T2): One week	None	Action, object, person, setting coding principle	Accuracy of detail: SAI ($M = 113.41$) versus FR ($M = 78.32$), F (1, 84) = 18.07, $p < 0.001$ and $d = 1.18$ (correct details) SAI ($M = 13.73$) versus FR	Accuracy of detail: No significant difference in accuracy—$Fs(1, 84) \leq 0.02$, $ps \geq 0.902$ and $ds = 0.02$

(Continues)

TABLE 1 (Continued)

	Authors	Experiment	Sample	Interview	Immediate/ Delay	Additional measures	Data coding	Results	
								Time 1	Time 2
								(M = 7.55), F (1, 84) = 23.91, p < 0.001 and d = −1.05 (incorrect details)	
14	Krix et al. (2015)	1	125 adults (91 females and 34 males, aged between 18 and 64 years), recruited from general public and a local university.	SAI Written free recall (FR)	Immediate (T1)	None	Action, object, person, setting coding principle	Accuracy of detail: SAI (M = 117.16) versus FR (M = 85.89), B = 66.27, 95% CI [−39.50, 172.04], SE = 53.39, β = 0.13 and p = 0.217 (correct details) SAI (M = 14.43) versus FR (M = 10.06) and B = −8.13, 95% CI [−29.58, 13.32], SE = 10.83, β = −0.08, p = 0.454. (Incorrect details)	
15	Krix et al. (2016)	1	127 adults (106 females and 21 males, aged between 18 and 63 years). Recruited from a local university and community	SAI Written free recall (FR)	Immediate (T1)	Stress	Action, object, person, setting coding principle	Accuracy of detail: SAI (M = 21.29) versus FR (M = 13.34), F (1, 122) = 81.65, p < 0.001 and d = 1.62. Person details: SAI (M = 10.07) versus FR (M = 5.24), F (1, 108) = 77.50, p < 0.001 and d = 1.64.	
16	Mackay and Paterson (2015)	1	80 adults (50 females and 30 males, average age of M = 19.6 years) recruited via an online experiment registration system.	SAI Neutral filler questions (control)	Immediate (T1) Delay (T2): One day	Misleading postevent information (PEI)	Single accuracy scoring	Accuracy of detail: Immediate SAI (M = 0.879) versus control (M = 0.815), F (1, 73) = 7.421, p = 0.008 and n^2 = 0.092.	Accuracy of detail: Immediate SAI (M = 52.6) versus delayed SAI (M = 38.33), F (1, 73) = 7.032, p = 0.010 and n^2 = 0.088.
17	Maras et al. (2014)	1	33 adults with autism spectrum disorder (ASD) (27 males and 6 females, average age of M = 42.32) recruited via autism support groups. Comparison: 35 adults (26 males and 9 females, average age of M = 43.37) recruited through local newspaper advertisements	SAI Structured recall (SR; SAI booklet with the removal of cognitive and memory-enhancing techniques)	Immediate (T1) Delay (T2): One week	None	Action, object, person, setting coding principle	Accuracy of detail: ASD SAI (M = 0.80) versus ASD SR (M = 0.88), t (31) = 2.92, p < 0.01 and d = 1.02 [−1.72, −0.27] Comparison SAI (M = 0.87) versus comparison SR (M = 0.87)−t (33) = 0.06, p = 0.96 and d = 0.02 [−0.65, 0.68] SAI (M = 0.83) versus SR (M = 0.87), F (1, 64) = 5.31, p < 0.05 and d = 0.54 [−1.02, −0.05]	Accuracy of detail: ASD SAI versus ASD SR, t (22) = 1.28, p = 0.22 and d = 0.52 [1.32, 0.31] Comparison SAI versus comparison SR, t (28) = 1.80, p = 0.08 and d = 0.66 [-0.10, 1.37]

TABLE 1 (Continued)

	Authors	Experiment	Sample	Interview	Immediate/ Delay	Additional measures	Data coding	Results	
								Time 1	Time 2
18	Matsuo and Miura (2017)	1	180 adults (104 females and 78 males, aged between 18 and 58 years) recruited through a local university.	SAI Cognitive interview (CI) Written free recall (FR)	Immediate (T1) Delay (T2): One week	None	Action, object, person, setting coding principle	Accuracy of detail: Person details: SAI (M = 47.80) versus CI (M = 34.73) versus FR (M = 34.87) Action details: SAI (M = 11.37) versus CI (M = 11.93) versus FR (M = 12.37) Object details: SAI (M = 7.07) versus CI (M = 5.93) versus FR (M = 5.13) Setting details: SAI (M = 16.00) versus CI (M = 3.53) versus FR (M = 2.17)	Accuracy of detail: Person details: SAI (M = 34.53) versus CI (M = 30.17) versus FR (M = 25.63) Action details: SAI (M = 7.77) versus CI (M = 9.27) versus FR (M = 9.37) Object details: SAI (M = 4.43) versus CI (M = 4.17) versus FR (M = 3.63) Setting details: SAI (M = 13.43) versus CI (M = 5.73) versus FR (M = 1.87)
19	McPhee et al. (2014)	1	84 adults (50 females and 34 males, average age of M = 22.12) recruited from the general public.	SAI Spoken free recall (SFR) No recall (activity booklet including work task and the general knowledge test; control)	Immediate (T1)	Misleading postevent information (PEI)	Single accuracy scoring	Accuracy of detail: SAI (M = 0.96) versus SFR (M = 0.97), t (42) = −0.906 and p = 0.37 Susceptibility to misinformation: SAI (M = 0.52) versus SFR (M = 0.55) versus no recall (M = 1.19), F (2, 62) = 3.31 and p = 0.04, n^2 = 0.098 Inoculation to misinformation: SAI (M = 2.47) versus SFR (M = 2.30) versus no recall (M = 1.33), F (2, 62) = 5.15, p = 0.009 and n^2 = 0.143	
20	Miura and Matsuo (2021)	1	97 adults (67 females and 30 males, average age of M = 20.0 years) recruited through a local university.	SAI Spoken SAI (S-SAI) Spoken free recall (SFR)	Immediate (T1) Delay (T2): One week	None	Single accuracy scoring	Accuracy of detail: SAI (M = 64.48) versus S-SAI (M = 55.23) versus FR (M = 22.79), F (2, 92) = 67.99, p = <0.001 and n^2 = 0.59	Accuracy of detail: SAI (M = 39.39) versus S-SAI (M = 29.17) versus FR (M = 23.85), F (2, 94) = 9.75, p = <0.001 and n^2 = 17
21	Paterson et al. (2015)	1	104 adults (74 females and 30 males, average age M = 19.8 years) recruited through a local university.	SAI No SAI (control)	Immediate (T1) Delay (T2): 24 h; one week	Misleading postevent information (PEI)	Single accuracy scoring	Accuracy of detail: Imm-SAI (M = 60.42) versus 24h-SAI (M = 51.65) versus week-SAI (M = 38.04), F (2, 75) = 13.47, p < 0.001 and n^2 = 0.264.	Accuracy of detail: Imm-SA (M = 48.58) versus week-SAI (M = 35.23) versus No-SAI (M = 38.96), F (3, 100) = 4.99, p = 0.003 and n^2 = 0.130. 24h-SAI (M = 44.38) versus week-SAI (M = 35.23), p = 0.016

(Continues)

TABLE 1 (Continued)

	Authors	Experiment	Sample	Interview	Immediate/ Delay	Additional measures	Data coding	Results	
								Time 1	Time 2
									Susceptibility to misinformation: Imm-SAI (M = 1.35) versus 24h-SAI (M = 1.62) versus week-SAI (M = 2.85) versus no-SAI (M = 1.96), F (3, 100) 3.483, p = 0.019 and n^2 = 0.095
22	Pfeil (2016)	1	144 adults (92 females and 52 males, aged between 18 and 60) recruited from a local community	SAI Written free recall (FR) No recall (T2)	Immediate (T1) Delay (T2): One week	None	Action, object, person, setting coding principle	Quantity of detail: Person details—SAI (M = 53.58) versus FR (M = 30.65), t = 6.05, p < 0.001 and d = 1.24 Action details—SAI (M = 24.21) versus FR (M = 19.98), t = 1.93 and d = 0.39 Object details—SAI (M = 8.85) versus FR (M = 8.19), t = 0.69 and d = 0.14 Setting details—SAI (M = 17.35) versus FR (M = 17.75), t = −0.20 and d = 0.04 Accuracy of detail: SAI (M = 95.40) versus FR (M = 70.69), t = 3.39, p < 0.001 and d = 0.69 (correct details) SAI (M = 7.75) versus FR (M = 4.98), t = 2.77, p < 0.01 and d = 0.57 (incorrect details)	Quantity of detail: Person details—SAI (M = 47.60) versus No recall (M = 35.27), t = 3.39, p < 0.001 and d = 0.69 Action details—SAI (M = 27.63) versus No recall (M = 22.81), t = 2.65, p < 0.01 and d = 0.54 Object Details—SAI (M = 7.42) versus No recall (M = 6.98), t = 0.65 and d = 0.13 Setting details—SAI (M = 22.19) versus No recall (M = 16.60) t = 2.91, p < 0.01 and d = 0.59 Accuracy of detail: SAI (M = 97.19) versus No recall (M = 73.25), t = 3.71, p < 0.001 and d = 0.76 (correct details) SAI (M = 6.94) versus No recall (M = 7.44), t = −0.44 and d = 0.09 (incorrect details)

Note: All studies utilised a between-subjects design in methodology.

Abbreviation: BF, Bayes factor.

One particular study that looked at children found that those who completed the SAI recalled significantly more information than the comparison group (Af Hjelmsäter et al., 2012). Specifically, the complete SAI including all five sections resulted in greater recall compared to the open interview form (only the first two sections of the SAI). An additional estimator variable was also incorporated in this study (Af Hjelmsäter et al., 2012) to determine whether the SAI could serve as an inoculation against the negative effects of social influence (i.e. co-witness) on children's memory recall. However, the SAI did not reduce the effect of social influence (Af Hjelmsäter et al., 2012).

Two studies focused on different social and physiological factors (Krix et al., 2016; Maras et al., 2014). One of these reviewed the efficacy of the SAI amongst participants with Autism Spectrum Disorder (ASD; Maras et al., 2014). However, it was found that the SAI had no benefit on this specific sample. This was the case even when comparisons were made with the structured recall group, which had removed the cognitive and memory-enhancing techniques inherent in the SAI. Maras et al. (2014) suggest that despite the removal of the social component of interviews and utilising self-administration, this particular group had difficulty in following complex linguistic instructions.

Stress exposure of participants on memory performance was also considered (Krix et al., 2016). It was found that stress did not influence memory recall, and the SAI was able to enhance the quantity of information recalled relative to other interview types when participants experienced moderate stress (Krix et al., 2016). Few studies have considered the impact of acute physiological stress on a witness's response to the SAI, with most using non-violent mock crimes as the stimulus event (Horry et al., 2021). Therefore, further consideration is needed for this under-researched variable to clearly understand the impact stress has on a witness's response to the SAI.

3.2 | System variables

Table 1 illustrates that 23 experiments incorporated the system variable of a time delay between the event and utilisation of the SAI, and three of these experiments provided no immediate recall opportunity (Experiment 2, Gabbert et al., 2009; Experiment 1 and 2, Gabbert et al., 2012). Twenty-two out of these 23 experiments found that employment of the SAI after a time delay had positive effects on accurate recall during subsequent retrieval attempts. These time delays varied in duration with experiments ranging from delays of 24 h (Chevroulet et al., 2021; Paterson et al., 2015) to 1 month (Chevroulet et al., 2021). The optimal deployment timeframe for administering the SAI was probed further and found that accuracy rates of recall decreased following a time delay of 24 h or more (Chevroulet et al., 2021; Paterson et al., 2015). However, the positive effect on accurate recall following a time delay was not found in one of the 23 experiments (Maras et al., 2014), which was due to the ASD participants' difficulty in following complex linguistic instructions.

Performance on retrieval attempts after having completed an earlier SAI was another system variable considered. The two experiments that incorporated this showed that eyewitnesses who completed an initial SAI reported more correct details on a subsequent report than witnesses who did not complete an initial SAI, and the accuracy of their subsequent reports was also higher overall (Gawrylowicz, Memon, & Scoboria, 2014; Experiment 1, Gawrylowicz, Memon, Scoboria, Hope, & Gabbert, 2014). Therefore, prior experience with the SAI can allow eyewitnesses to develop transferable skills for an event even following a 1-week time delay (Gawrylowicz, Memon, & Scoboria, 2014).

Only five out of the 27 experimental comparisons conducted an immediate recall without any time delay (Experiment 1, Gabbert et al., 2009; Gittins et al., 2015; Krix, et al., 2015, Krix et al., 2016; McPhee et al., 2014). Based on previous research, it would be expected that undertaking the SAI immediately after witnessing an event would provide a more detailed account than those collected after a time delay. This was indeed the case for 25 of the experiments, but the remaining two experiments report the opposite effect (Experiment 1, Gabbert et al., 2009; McPhee et al., 2014). This opposite effect was attributed to a reduced effort in participants completing the SAI and

thus producing a truncated recall (McPhee et al., 2014). In their experiment, Gabbert et al. (2009) attributed this effect to requiring more clarity in the initial instructions to participants. This issue has since been resolved.

3.3 | Methodological variables

The studies examined compared a range of interview techniques to the SAI. For example, 13 of the 27 experiments incorporated written FR as the comparison interview technique to SAI. All these experiments demonstrated that the SAI elicited more accurate and detailed information. Four experiments (Dando et al., 2020; Experiment 1, Gabbert et al., 2022; McPhee et al., 2014; Miura & Matsuo, 2021) adapted the FR technique to be provided verbally as opposed to written. Results showed a higher accuracy rate amongst the spoken recall than written FR for reasons previously outlined.

Only two experiments directly compared the SAI to the CI on memory recall (Experiment 1, Gabbert al., 2009; Matsuo & Miura, 2017). Hope et al. (2014) also used the CI as a measure to establish the impact of the SAI on protecting memory for future interviews as opposed to a direct comparison per se. Results from the CI comparison were mixed with Gabbert et al. (2009) reporting that the CI elicited higher accurate recall than the SAI; however, this difference was not statistically reliable. Matsuo and Miura (2017), in contrast, reported that the SAI provided more accurate recall both immediately and following a delay when compared to the CI.

Although components of the SAI were used in all 22 studies, a few of these adapted the SAI to provide specific comparisons of individual components. For example, Maras et al. (2014) used a structured recall, which followed a similar structure to the SAI, but initial instructions did not support memory retrieval. Although this study found the structured recall to elicit more information than the SAI overall, the sketch component of the SAI elicited more correct details amongst witnesses with ASD. The sketch component of the SAI was also found to elicit more accurate (compared to inaccurate) information from the older adult population (Dando et al., 2020). Taken together, these findings suggest that the sketch section of the SAI has benefits for both older adults as well as those with complex learning difficulties. Af Hjelmsäter et al. (2012) directly compared different variations of the SAI by comparing an 'Open' form of the tool using only the FR section, against a 'Structured' form which began with instructions for context reinstatement before introducing FR. However, findings suggest that the complete SAI with all five sections is most effective for eliciting correct information (Af Hjelmsäter et al., 2012).

One study (Miura & Matsuo, 2021) examined a spoken version of the SAI where for each section, the instructions were read aloud by the interviewer, and participants verbally reported their recall. The sketch component of the SAI was also verbally reported. However, results found that participants who completed a written version of the SAI reported more correct information than a spoken SAI and spoken FR. It is suggested that the effectiveness of the SAI is inherent in the method of writing, and this may be the factor in facilitating later recall of witnessed events (Miura & Matsuo, 2021). A digital version of the SAI has also been considered in relation to the quantity and quality of information recalled by eyewitnesses (Gabbert et al., 2022). However, no differences were found in the quantity or quality of information reported by eyewitnesses completing either a computer, mobile or paper version of the SAI. Similar findings were found when the mobile and paper SAI were compared to written FR. These preliminary findings suggest that administering the SAI in a digital format had no detrimental effect on eyewitness reporting (Gabbert et al., 2022).

All studies were recruited from their local community, which lends positively to ecological validity and generalisability. Other methodological variables that were considered were that of the data coding system used within each study. Thirteen experiments used a memory recall coding scheme that classified each piece of information provided by participants (regardless of whether it is correct or incorrect) as an Action, Person, Object or Setting detail. The remaining 14 experiments utilised single accuracy coding, which tallies with each piece of information recalled as either correct or incorrect. The two experiments conducted by Gabbert et al. (2012) utilised both coding

methods, which resulted in different accuracy rates. We were unable to ascertain whether the coding technique used had any effect on the report-dependent measures of recall.

The final methodological variable considered was the incorporation of misinformation. Eight studies investigated non-critical event misinformation, in addition to the standard memory outcomes. Misinformation was introduced either through the use of misleading questions or through post-event information (Af Hjelmsäter et al., 2012; Chevroulet et al., 2021; Gabbert et al., 2012; Gittins et al., 2015; Hudson et al., 2020; Mackay & Paterson, 2015; McPhee et al., 2014; Paterson et al., 2015). Overall results show that the SAI allowed witnesses to produce a full and accurate account of an event even after exposure to non-critical misinformation, and it did not have any effect on the overall accuracy of information being recalled. Further to this, the SAI can provide inoculation to any subsequent misinformation if administered immediately following an event (McPhee et al., 2014). This is an important result to consider in relation to the optimal utilisation of the SAI to minimise the misinformation effect.

4 | DISCUSSION

This systematic review sought to identify whether the SAI is an effective investigative interview tool in obtaining accurate testimony, enhancing memory retention and reducing susceptibility to misinformation. Building on the findings from Horry et al. (2021), we provided an up to date review and included additional variables not previously considered within the meta-analysis. For this purpose, 22 research studies, reporting a total of 27 experiments using the SAI were reviewed with a focus on estimator, system and methodological variables reported in the studies.

Of the studies reviewed, we found that the structured format of the SAI could be of benefit for recall accuracy in both older adults (Dando et al., 2020; Gawrylowicz, Memon, Scoboria, Hope, & Gabbert, 2014) and children (Af Hjelmsäter et al., 2012). Older adults recall more correct information later when the SAI was used to obtain their initial report as opposed to FR (Dando et al., 2020) and outperformed younger adults in that they reported more details with a higher accuracy using the SAI (Gawrylowicz, Memon, Scoboria, Hope, & Gabbert, 2014). This result contradicts the notion that older adults should recall less information as memory and consequently, recall accuracy declines in older age (Bornstein et al., 2000). As effective cue utilisation can reduce memory errors in the older age group (Thomas & Bulevich, 2006), it is possible that the retrieval support cues that are specific to the SAI instructions help to counter age-related memory decline in older adults. The instructional cues provided in the SAI could also benefit recall accuracy in children by encouraging them to spend time and effort on their responses. Previous research with the CI, on which the SAI is based, also revealed higher accuracy rates in children when instructional cues are present (Geiselman & Padilla, 1988). Another reason for older adults outperforming younger adults could be related to motivation (Gawrylowicz, Memon, Scoboria, Hope, & Gabbert, 2014); more research is needed to examine this difference and the potential effect of motivation directly. Therefore, more work is needed to determine if the SAI is an effective interview tool for older adults and children in different contexts, specifically how younger children (below 8 years) who have less developed abilities to encode information and who could have difficulty understanding instructions perform with the SAI. Incorporating misinformation as an additional variable would also enhance our understanding of the older age group who can be susceptible to recalling misinformation because of errors in sourcing memories of an event (Ferguson et al., 1992). In addition, given that the SAI did not reduce children's susceptibility to social influence (Af Hjelmsäter et al., 2012), other forms of misinformation (i.e. written and visual) should be considered to see if this impacts upon children's accuracy in the SAI.

Although misinformation has not yet been examined with older adults and children, eight studies have examined the effect of the SAI on the acquisition of misinformation with a young adult population. We found that the SAI allows participants to produce full and accurate accounts of an event even after exposure to misinformation, which suggests that the SAI may provide inoculation to any subsequent misinformation if administered

immediately following an event (McPhee et al., 2014). An immediate recall opportunity can reduce conformity to misinformation by committing the eyewitness to their initial account in their desire to remain consistent (Wang et al., 2014). Misinformation can also create a sense of false confidence in witnesses' memory, such that those who are exposed to misinformation become more confident in their account over time (Mudd & Govern, 2004), which may affect the number of incorrect items that are reported. However, it is not known how immediate recall using the SAI can prevent a false inflation of confidence in the memory for incorrect information obtained from post-event misinformation.

Immediate administration of the SAI following an event also served to enhance recall accuracy following a time delay. This is in line with previous research that suggests engaging in a high-quality initial recall attempt can preserve episodic memory, thus resulting in enhanced recall following a delay (Hope et al., 2014). The duration of the time delay also impacted the effectiveness of the SAI such that there was a diminished positive affect of the SAI after 24 h, and this continued up to 1 month following an event (Chevroulet et al., 2021; Paterson et al., 2015). This optimal timeframe should allow for complete and accurate recall to be obtained; however, should circumstances prevent this, it must be noted that the positive effect of the SAI will be significantly reduced.

Further to this, the accuracy of eyewitness recall was amplified when participants had prior experience with the SAI as they acquired transferable skills for a new event (Gawryłowicz et al., 2014a). As initial retrieval of an event can reduce the misinformation effect (Huff et al., 2016), this should be tested with the SAI to see if familiarity can reduce susceptibility to misinformation after a time delay. Furthermore, research on the effectiveness of an immediate SAI on recall after a time delay should focus more on children and older adults who are more susceptible to the effects of time delay on memory (Memon et al., 2003; Pipe et al., 1999). For example, children provide fewer correct details when recalling information for the first time following a long delay (e.g. two years) and are more likely to elaborate or include details from other events they may have experienced (Pipe et al., 1999). Older adults are also more likely to produce inaccurate recall when experiencing a time delay (e.g. one week) due to difficulties in remembering contextual and perceptual details of an event (Memon et al., 2003). Given the differences across ages, the inclusion of a more diverse sample is warranted to explore any interactive effects between the age group and the interview approach on memory recall after a time delay.

The structure of the SAI is an additional factor to consider for eliciting higher-quality recall. One aspect not reviewed by Horry et al. (2021) was the sketch component of the SAI. The sketch component of the SAI is an important feature to consider, as drawing can serve as both context reinstatement and a retrieval cue. An initial sketch completed by adolescents and older adults results in significantly more details about people and settings in a subsequent FR account (Jack et al., 2015). This benefit extends to children (Butler et al., 1995; Milne & Bull, 2002) as drawing helps to maintain episodic memory (Anderson, 1983) and aids with the integration of information into long-term memory resulting in better recall (Wammes et al., 2019). The different stages of child development should be considered further, specifically in terms of motor control skills and the impact a sketch could have in acting as a retrieval cue for future recall. Furthermore, differences in language and handwriting skills could be explored to see if sketching could be of benefit for younger children who might be unable to complete the written sections of the SAI, as well as for individuals from diverse educational and cultural backgrounds with potential language or writing barriers. The sketch component of the SAI has already been found to have positive benefits for older adults as well as for those with complex learning difficulties (Dando et al., 2020; Maras et al., 2014). However, participants with ASD were asked to mentally recreate the physical and physiological aspects of an event despite not having witnessed it live (Maras et al., 2014). This is an important aspect to consider as memory is more likely to be recalled when the cues present during retrieval match the cues present during encoding (Tulving & Thomson, 1973). As developmental disabilities can impact the ways people perceive and interpret an event (Maras et al., 2014), a real-life simulated event should be used for this group to recall using the SAI.

Although the evidence base is relatively small, the majority of findings point toward the SAI eliciting more accurate and detailed information regardless of the comparison interview technique used (i.e., FR, CI or a minimally adapted version of the SAI). This is in line with the first study that illustrated the positive investigative nature of the

SAI as an interview tool (Gabbert et al., 2009) and could be attributed to the specific instructions that facilitate recall. To align with the increase in technology use, the SAI has shifted away from the initial pen-and-paper approach towards a digital version (Gabbert et al., 2022). Although no differences were found in the quality and quantity of information recalled in the digital version of the SAI compared to the paper-based interview, there are several advantages that a digital SAI can offer in terms of flexibility and functionality that could prove useful in the future. These preliminary findings of the digital SAI (Gabbert et al., 2022) should be expanded upon by using real-world scenarios to establish whether this would facilitate accurate recall in both initial and delayed accounts.

Taken together, the systematic review highlights the positive benefits of the SAI as an investigative interview tool that can be applied across real-world scenarios. This has been demonstrated through the ability of the SAI to elicit comprehensive and accurate recall, both in an initial account and following a delay. In addition, the SAI has been shown to reduce the negative effects of misinformation and be of benefit to younger and older adults. However, further research is still needed to explore the SAI and the misinformation effect across all age groups, specifically with adolescents, which is yet to be researched. Indeed, the adoption of the SAI as an investigative interview tool across all UK police forces will provide more real-world applications to better inform policymakers as to its effectiveness.

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