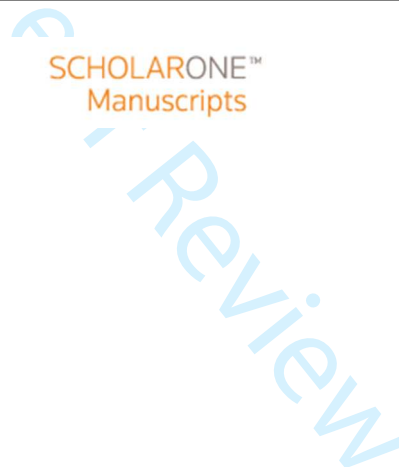




The combined effects of questioning technique and interviewer manner on false confessions.

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3 The combined effects of questioning technique and interviewer manner on false confession
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7 **Abstract**
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11 While it is known that interrogation tactics can elicit false confessions and interviewer
12 manner may determine the outcome of an interview, the combined effects of questioning
13 technique and interviewer manner on false confessions has not been examined empirically.
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15 Following a false accusation of theft, participants were interviewed in one of four questioning
16 conditions (minimisation, repetitive questioning, leading questions and non-leading
17 questions) in which interviewers adopted a stern or friendly manner. Perceptions of pressure
18 to confess and interviewer behaviours were measured. Significantly more false confessions
19 were elicited using non-leading questions rather than repetitive questioning. More false
20 confessions were elicited in the friendly interviewer condition than in the stern interviewer
21 condition. Neither interviewer manner nor questioning technique had a significant effect on
22 subjective ratings of pressure to confess. The finding that false confessions may be elicited in
23 the absence of coercive tactics may have implications for informing best practices in
24 investigative interviewing.
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41 **Key words:** False confessions; Interview tactics; Interviewer demeanour
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3 False confessions are one of the most misunderstood causes of error during legal proceedings
4 and contribute to wrongful convictions (Leo, 2009; The Innocence Project, 2017). Their
5 elicitation poses a major problem for the Criminal Justice System, the function of which is to
6 deliver justice, punish the guilty and protect the innocent (Gov.UK, 2017). While it is
7 acknowledged that police-induced false confessions are the most common type of false
8 confession (Leo, 2009) many legal professionals continue to question the existence of police-
9 induced false confessions, even when DNA evidence confirms a suspect's innocence (Findley
10 & Scott, 2006; Hirsch, 2005; Kassin & Gudjonsson, 2004). Therefore, to reduce the risk of
11 false confessions it is crucial that interviewing officers understand fully the factors
12 contributing to these being elicited.
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26 Kassin and Wrightsman (1985) proposed a theoretical framework that describes three
27 psychologically distinct types of false confession. Coerced-compliant false confessions arise
28 following exposure to coercive or intimidating methods of interrogation. In this case, the
29 suspect makes a public admission of guilt, while maintaining a private belief of innocence,
30 and the short-term benefits of confessing appear to outweigh the long-term costs of
31 confessing. Coerced-internalised false confessions also arise following exposure to extreme
32 interrogation methods. However, unlike coerced-compliant false confessions, this type of
33 false confession involves the suspect internalising a belief of guilt, albeit temporarily. In
34 contrast to coerced-compliant and coerced-internalised false confessions, voluntary false
35 confessions arise from an internal need to confess rather than due to external pressure, for
36 example, from the police (Kassin et al., 2010). Reasons for making voluntary false
37 confessions include the protection of the true perpetrator, a desire for notoriety and a need to
38 be punished (Gudjonsson & Pearse, 2011).
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3 In the US, interrogators are permitted to use confrontational, suggestive,
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5 manipulative, and stress-inducing tactics (Bull & Soukara, 2010; Drizin & Leo, 2004;
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7 Soukara, Bull, Vrij, Turner, & Cherryman, 2009). Interrogators generally dominate the
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9 conversation (Inbau, Reid, Buckley, & Jayne, 2001) and use various tactics to minimise the
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11 perceived negative consequences of confessing, and to increase feelings of anxiety associated
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13 with denial (Kassin et al., 2010). In contrast to the more accusatorial approach to
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15 interviewing often used in the US (Vallano, Evans, Schreiber Compo, & Kieckhaefer, 2015),
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17 police officers in the UK commonly use an investigative approach to interviewing (Clarke,
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19 Milne, & Bull, 2011).
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24 However, during the 1980s and early 1990s, police suspects in England and Wales
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26 were interrogated rather than interviewed (Williamson, 2006) and the focus on obtaining
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28 confessions using unethical methods was a major concern (Shepherd, 1993). The introduction
29
30 of the PEACE model of interviewing in 1993 resulted in a shift from the interrogative method
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32 to the new investigative interviewing approach (Clarke et al., 2011; Griffiths & Milne, 2006).
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34 The PEACE model was designed to replace accusatorial, guilt-presumptive approaches with
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36 more ethical, non-coercive, information-gathering approaches, which improve the quality of
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38 interviews and information obtained (Gudjonsson & Pearse, 2011; Snook, Eastwood, Stinson,
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40 Tedeschini, & House, 2010). Rather than focussing on seeking confessions (Clarke et al.,
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42 2011), the PEACE model encourages the use of open questions (Walsh & Bull, 2012) to
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44 encourage suspects to provide accounts of events (Walsh & Bull, 2010). Techniques such as
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46 conversation management are employed to encourage communication between the
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48 interviewer and interviewee and to increase the amount of information elicited (Clarke &
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50 Milne, 2001).
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3 During an investigative interview, officers may use techniques and tactics to
4 encourage suspects to provide information and truthful accounts of events (Beune, Giebels, &
5 Sanders, 2009). However, while specific tactics may persuade guilty suspects to tell the truth,
6 proven false confession cases illustrate that exposure to possibly coercive interview tactics
7 can inadvertently also lead to confessions by innocent suspects (Drizin & Leo, 2004).
8 Therefore, the challenge for investigative interviewers is to obtain true confessions from
9 guilty suspects while minimising the possibility of eliciting false confessions (Horgan,
10 Russano, Meissner, & Evans, 2012; Meissner, Russano, & Narchet, 2010). Despite the risks
11 associated with the use of misplaced interview tactics, to date, with a few notable exceptions
12 (Blair, 2007; Klaver, Lee, & Rose, 2008; Narchet, Meissner, & Russano, 2011; Russano,
13 Meissner, Narchet, & Kassin, 2005), not many experimental studies have examined how
14 different interview tactics may contribute to the elicitation of false confessions.
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31 Minimisation is one tactic that can be used to obtain confessions by downplaying the
32 perceived seriousness of an alleged incident and the consequences of confessing (Blair, 2005;
33 Moffa & Platania, 2009; Russano et al., 2005). When using minimisation, the interviewer
34 expresses sympathy, adopts a friendly demeanour, normalises the crime, and uses ‘face-
35 saving’ strategies that blame the victim and suggest the suspect’s behaviour was accidental,
36 provoked, or peer-pressured (Horgan et al., 2012; Moffa & Platania, 2009). These strategies
37 may also imply leniency in sentencing (Kassin, 2015; Kassin & McNall, 1991; Ofshe & Leo,
38 1996, 1997). Minimisation may also elicit false confessions particularly in cases of less
39 serious offences when the interviewer offers a favourable immediate outcome and the suspect
40 feels trapped (Kassin, 2015; Kassin et al., 2010; Kassin & McNall, 1991). In the UK explicit
41 use of minimisation is deemed unacceptable (Kassin et al., 2010; Shawyer, Milne, & Bull,
42 2009) and is rarely used (Bull & Soukara, 2010). However, interviewers may occasionally
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3 use more subtle forms of minimisation such as showing concern for the suspect (Soukara et
4 al., 2009), which may contribute to inducing a false sense of security.
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9 Laboratory research documents consistently the coercive nature of minimisation in
10 eliciting confessions. For example, using the computer-crash paradigm (Kassin & Kiechel,
11 1996), Klaver et al. (2008) found that minimisation elicited significantly more false
12 confessions in contrast to maximisation. Maximisation is considered a more aggressive form
13 of persuasion used to scare, intimidate, and induce anxiety in suspects (Horgan et al., 2012;
14 Kassin & McNall, 1991; Narchet et al., 2011). Using a more ecologically valid paradigm,
15 Russano et al. (2005) found that after accusing participants of cheating during a problem-
16 solving task, exposure to minimisation elicited both true and false confessions.
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29 Incorporating the Russano et al. (2005) paradigm, Narchet et al. (2011) found that
30 when trained interrogators believed participants were guilty of cheating they were more likely
31 to use tactics designed to increase pressure to confess, particularly minimisation and
32 maximisation. In this important body of work documenting the deleterious effects of
33 minimisation, participants were generally presented with pre-prepared, handwritten false
34 confessions, which they were asked to sign following the false accusation (e.g., Blair, 2007;
35 Klaver et al., 2008; Russano et al., 2005). In a limited number of studies, rather than simply
36 being asked to sign a false confession, participants have been interrogated following a false
37 allegation (e.g., Narchet et al., 2011). Therefore, it would be beneficial to further explore the
38 persuasive nature of minimisation in interviews conducted with mock suspects.
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52 Repetitive questioning is a further tactic, which may induce guilty suspects to confess
53 despite initial denials (Bull & Soukara, 2010; Penney, 2012). However, this tactic also
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3 appears to be associated with the elicitation of false confessions (St-Yves & Deslauriers-
4 Varin, 2009). Repetitive questioning implies that an initial response is incorrect, or
5 unacceptable, and that a change in response is required (Baxter, Boon, & Marley, 2006;
6 Gudjonsson, 2003). Whether used intentionally or unintentionally, repetitive questioning, a
7 form of interrogative pressure, may increase uncertainty, heighten the perceived social
8 demands of the situation and increase susceptibility to interrogative suggestibility
9 (Gudjonsson & Clark, 1986; Schaaf, Alexander, & Goodman, 2008). This tactic, which has
10 been described as aversive, intimidating (Leggett, Goodman, & Dinani, 2007) and guilt-
11 assumptive (Baldwin, 1992), may increase vulnerability during an investigative interview.
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24 Repetitive questioning is not recommended by the PEACE model of interviewing
25 (Walsh & Bull, 2012). However, an examination of police interview practices in England and
26 Wales reported the frequent use of repetitive questioning when attempting to obtain
27 information from suspects (Soukara et al., 2009). While the negative effects associated with
28 repetitive questioning are acknowledged (St-Yves & Deslauriers-Varin, 2009), to date there
29 has been no empirical examination of the extent to which repetitive questioning may be
30 associated with suspects making false confessions.
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41 Leading questions, another form of interrogative pressure (Baxter et al., 2006), which
42 prompt an interviewee to respond in a certain way (Gudjonsson & Clark, 1986; Gudjonsson,
43 2003; Soukara et al., 2009), have also been associated with known false confession cases
44 (Garret, 2010). Asking leading questions, which may contain plausible but misleading
45 information, may result in memory for an event being supplemented, distorted, and
46 reconstructed (Busey & Loftus, 2007; Loftus, 1975, 1979, 2002). The use of leading
47 questions can also introduce erroneous information, impair accurate recall, induce
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3 uncertainty, and make it difficult to differentiate sources of information (Gudjonsson &
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5 Clark, 1986; Loftus, 1975, 2002, 2005).
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9 Leading questions, which the PEACE model discourages (Walsh & Bull, 2015) in the
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11 UK, are also a possible breach of sections 76 and 78 of the Police and Criminal Evidence Act
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13 1984 (Clarke & Milne, 2001). Leading questions are generally observed infrequently in
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15 interviews conducted by officers in the UK (Clarke et al., 2011; Read, Powell, Kebbell,
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17 Milne, & Steinberg, 2014). However, Soukara et al. (2009) reported the use of leading
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19 questions, which did not contain misleading information, in 30 of the 31 confession
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21 interviews with suspects conducted in an English police force. Due to the dangers associated
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23 with leading questions, it would be prudent to examine whether this practice could potentially
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25 elicit false confessions.
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31 The dangers associated with coercive interview tactics may be particularly salient
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33 during interviews with vulnerable individuals. There is no universal definition of what
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35 constitutes a vulnerable witness (Bull, 2010). However, those who might be considered
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37 vulnerable include child witnesses (Bull, 2010), individuals with mental illnesses and
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39 personality disorders (O'Mahony, Milne, & Grant, 2012) as well as individuals with
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41 intellectual disabilities (Gudjonsson & Joyce, 2011). For example, individuals with an
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43 intellectual disability may be more susceptible to leading questions (Bowles & Sharman,
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45 2014) and misleading questions (Henry & Gudjonsson, 2007). However, research indicates
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47 that when individuals with learning disabilities are questioned in an appropriate manner using
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49 questions that are non-leading, simple, and free from abstract words or ideas (Jacobson,
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51 2008), they can be capable of providing accurate statements (Milne & Bull, 2001).
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3 In addition to the use of coercive tactics, interviewer attitudes and demeanours may
4 also contribute to determining the outcome of an interview (e.g., Bain & Baxter, 2000;
5 Baxter, Jackson, & Bain, 2003), and influence the decision to make a true or a false
6 confession (Holmberg & Christianson, 2002; Leo, 2009; Walsh & Bull, 2012). Ethical
7 interviewing, exemplified by the PEACE approach (Heydon, 2012), involves using a fair
8 approach which increases the likelihood of eliciting a truthful account of events while
9 reducing a suspect's stress and uncertainty (Milne & Bull, 1999). However, in certain
10 situations, an interviewer's behaviour may be perceived as negative, thereby increasing a
11 suspect's resistance to cooperate (Holmberg & Christianson, 2002). This may occur, for
12 example, when officers are under pressure to elicit information within time restraints, or if a
13 suspect does not respond to questions.
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29 If an aggressive interviewer manner is adopted, even unintentionally, inappropriate
30 pressure may be applied (Baldwin, 1992; Baxter, 2004). An abrupt and/or aggressive
31 interviewer manner may induce anxiety and feelings of powerlessness in a suspect, thereby
32 creating psychological distance between the interviewee and interviewer and increasing
33 susceptibility to suggestibility (Bain & Baxter, 2000). It has been hypothesised that under
34 these circumstances vulnerability to falsely confessing may increase (Baxter & Boon, 2000;
35 Gudjonsson & Lister, 1984). An accusatorial style of interviewing that reduces self-
36 confidence and does not enable a suspect to state her/his innocence may also result in a false
37 confession (Leo, 2009). Therefore, there is a need to examine empirically whether
38 interviewer manner may elicit false confessions.
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52 To summarise, specific questioning techniques and interviewer manners may
53 adversely affect a suspect and contribute to false confessions. Previous research examining
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3 interview tactics as predictors of false confessions has tended to focus on minimisation and
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5 maximisation tactics, which are more commonly used by interrogators in the US (e.g., Blair,
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7 2007; Klaver et al., 2008; Narchet et al., 2011; Russano et al., 2005). To date, there has been
8
9 no empirical examination of repetitive questioning and leading questions as predictors of
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11 laboratory-induced false confessions. Additionally, while it has been documented that an
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13 abrupt and aggressive interviewer manner may increase vulnerability during a police
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15 interview (Bain & Baxter, 2000; Baxter & Boon, 2000; Blandon-Gitlin, Sperry, & Leo,
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17 2011), interviewer manner as a predictor of laboratory-induced false confessions has not been
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19 examined.
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25 The present study adopted a novel approach in which the combined effects of
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27 questioning technique and interviewer manner on false confessions and perceptions of
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29 pressure to confess were examined. In an attempt to improve realism, the study incorporated
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31 a new paradigm in which participants were interviewed following a false accusation of theft.
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33 The false allegation was serious in nature, personally meaningful to those involved and free
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35 from ambiguity. Based on previous formative work (e.g., Baxter et al., 2003; Bull & Soukara,
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37 2010; Klaver et al., 2008; Narchet et al., 2011; Russano et al., 2005), it was predicted that
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39 coercive questioning techniques and a stern interviewer manner would elicit more false
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41 confessions and higher ratings of perceived pressure to confess in contrast to non-coercive
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43 questioning techniques and a friendly interviewer manner.
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48 **Method**

49 *Participants and Design*

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51 A total of one hundred and twenty members of the public and students were recruited. Fifty-
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53 three males and sixty-seven females aged 16 to 62 years ($M = 28.21$, $SD = 10.36$)
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3 participated. Participants were randomly assigned to one of eight experimental conditions in a
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5 2 demeanour (friendly vs stern) x 4 questioning technique (minimisation, repetitive
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7 questioning, leading questions and non-leading questions) between-participants design (see
8
9 procedure for further details).
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11 12 13 *Confederates*

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15 Four male undergraduate students responded to an advert in which confederates for a
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17 research project were required. The principal investigator trained the confederates to
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19 interview participants in each of the eight experimental conditions following a false
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21 allegation of theft. The confederates were trained to use the interviewer demeanours outlined
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23 by Bain and Baxter (2000) and they conducted the interviews using pre-prepared scripts (as
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25 outlined within the procedure).
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31 *Materials*

32 33 *Interviewer Behaviour Rating Scale (Bain & Baxter, 2000)*

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35 A 5-point Likert scale was used to assess the extent to which the confederate interviewers
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37 displayed 18 interviewer behaviours (1 = "Not at all" and 5 = "Very"). The behaviours were:
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39 nervous, severe, friendly, understanding, assertive, confident, professional, firm, respectful,
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41 positive, formal, warm, stern, organised, effective, authoritative, competent, and negative.
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44 This tool has been used in studies examining the effect of interviewer behaviour on
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46 interrogative suggestibility (e.g., Bain & Baxter, 2000; Baxter et al., 2003) and is considered
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48 a reliable method of measuring differences in perceptions of interviewer behaviour.
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51 52 *Perceived Pressure to Confess Scale*

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3 Incorporating a method used by Russano et al. (2005), an 11-point Likert scale was used to
4 rate the extent to which participants experienced pressure to confess (0 = “No pressure” and
5 10 = “Extreme pressure”).
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10 11 *Procedure*

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13 A pilot study was conducted to confirm that interviewer behaviour differentiated the stern
14 and friendly interviewer conditions. The four confederates were filmed conducting interviews
15 in a stern and friendly manner. University students ($n = 104$) rated the interviewers’
16 behaviour using the 18-item rating scale described above.
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24 In the main study, participants were invited to participate in a study examining the
25 relationship between personality traits and task performance. Participants were tested
26 individually and learnt that on successful completion of two personality questionnaires they
27 might be entitled to receive a £10 gift voucher. The vouchers were placed on the table at
28 which the participant was seated. While the participant completed the first questionnaire, the
29 researcher left the room for two minutes on the pretext of speaking to another participant. On
30 return, and after the participant had completed the questionnaire, the researcher counted the
31 vouchers, announced that one voucher was missing and falsely accused the participant of
32 theft. In reality, there was no missing voucher and none of the participants questioned the fact
33 that they did not know how many vouchers were initially placed on the table. The researcher
34 excused herself again and two minutes later one of the four confederates entered the room.
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50 The confederate introduced himself as part of the research team and advised the
51 participant that it was necessary to ask a few questions about the missing voucher.
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53 Incorporating Bain and Baxter’s (2000) interviewer manner technique, the confederate
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3 adopted either a friendly or a stern manner. In the friendly condition, in order to build rapport
4 and appear warm and friendly, the confederate introduced himself using his first name,
5 maintained eye contact with the participant, smiled, and adopted a relaxed posture. In the
6 stern condition, in order to appear formal and abrupt, the confederate introduced himself
7 using his full name, did not smile, and adopted an assertive and authoritative stance. The
8 confederate then asked the participant to recall the event in her/his own words and said he
9 would make notes while listening to the participant's account of the event. Following this
10 free recall stage, and adhering to the relevant script, the confederate asked a number of pre-
11 determined questions about the alleged incident and again noted the participant's responses.
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24 In the minimisation condition, the interviewer showed concern towards the
25 participant and offered 'face-saving' strategies, for example, by stating, "Don't worry" and
26 "I'm sure you didn't realise that this was a big deal". In the repetitive questioning condition,
27 participants were asked six times "Did you take the missing voucher?" In the leading
28 question condition, participants were asked questions which prompted a desired response, for
29 example, "The vouchers were clearly visible on the table, so it would have been easy to take
30 one wouldn't it?" and "So you were alone in the room for a few minutes, weren't you?"
31 Lastly, in the non-leading question condition, which adopted the non-coercive, information-
32 gathering approach advocated by PEACE, interviewers asked questions such as "Who was in
33 the room at the start of the experiment?", "Did anyone else come into the room?" and "Were
34 you alone in the room at any point?"
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50 At the end of the questioning stage, the confederate summarised the information
51 provided and asked the participant if s/he had anything else to add. Participants received
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3 their 'statement', which included their responses and the declaration: "I accept responsibility
4 for the missing voucher", which constituted a false confession. The confederate asked the
5 participant to sign the statement and participants who refused to sign after the first request
6 were prompted up to two more times. The confederate left the room and the researcher re-
7 entered and advised the participant that the study was examining false confessions. The
8 researcher re-established consent and asked the participant to complete the two rating scales.
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16 Lastly, participants were debriefed fully.
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20 **Ethical Considerations**

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22 Ethical approval was granted by the University's Research Ethics Committee. Participants
23 could not be exposed to accusations of a very serious nature or subjected to highly stressful,
24 prolonged interviews. Therefore, short interviews in which participants were accused of
25 stealing a £10 gift voucher were conducted. Due to the nature of the subject being
26 investigated, the use of deception was necessary. If a participant appeared upset or annoyed
27 following the false accusation and/or during the interview, the session terminated
28 immediately. One participant appeared to be upset after the researcher delivered the false
29 accusation. A second participant withdrew from the study after the confederate entered the
30 room and before the interview commenced. In both cases, the researcher debriefed the
31 participant immediately and destroyed the participant's data. If, following the false
32 accusation, a participant attempted to prove that s/he did not have the voucher, for example,
33 by asking the researcher or confederate to search a bag or pockets, the participant would have
34 been told it was not possible to conduct such a search. In accordance with the British
35 Psychological Society (2014) Code of Human Research Ethics, participants were debriefed
36 fully at the end of the study and reminded that they could withdraw their data.
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Results

Pilot study

One-way MANOVA was conducted which found significant differences in ratings between the stern and friendly interviewer conditions for 11 of the 18 interviewer behaviours noted above (see Table 1). Interviewers in the stern condition were rated significantly more severe: $F(1, 102) = 148.32, p < .001, \text{partial } \eta^2 = .60$; assertive: $F(1, 102) = 16.33, p < .001, \text{partial } \eta^2 = .14$; firm: $F(1, 102) = 41.73, p < .001, \text{partial } \eta^2 = .29$; stern: $F(1, 102) = 79.37, p < .001, \text{partial } \eta^2 = .44$; authoritative: $F(1, 102) = 51.53, p < .001, \text{partial } \eta^2 = .34$ and negative: $F(1, 102) = 57.91, p < .001, \text{partial } \eta^2 = .36$. Interviewers in the friendly condition were rated significantly more friendly: $F(1, 102) = 110.70, p < .001, \text{partial } \eta^2 = .52$; understanding: $F(1, 102) = 26.08, p < .001, \text{partial } \eta^2 = .20$; respectful: $F(1, 102) = 29.71, p < .001, \text{partial } \eta^2 = .23$; positive: $F(1, 102) = 34.38, p < .001, \text{partial } \eta^2 = .25$ and warm: $F(1, 102) = 55.50, p < .001, \text{partial } \eta^2 = .35$.

Insert Table 1 here

Main study: Manipulation check to examine the effect of interviewer manner on interviewer behaviour ratings.

One-way MANOVA was conducted which found significant differences in ratings between the stern and friendly interviewer conditions for four of the 18 interviewer behaviours (see Table 2). Interviewers in the stern condition were rated significantly more severe: $F(1, 118) = 10.30, p = .002, \text{partial } \eta^2 = .08$ and stern: $F(1, 118) = 11.45, p = .001, \text{partial } \eta^2 = .10$. Interviewers in the friendly condition were rated significantly more friendly: $F(1, 118) = 28.19, p < .001, \text{partial } \eta^2 = .20$ and understanding: $F(1, 118) = 13.39, p < .001, \text{partial } \eta^2 = .11$.

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7 *Effect of interviewer manner and questioning technique on false confessions*
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9 The number of false confessions obtained per experimental condition are shown in Table 3.
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11 None of the participants falsely confessed during the questioning stage of the interview. Each
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13 false confession was obtained when the confederate asked the participant to sign the
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15 statement.
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24 Logistic regression was performed to examine the effects of a stern interviewer manner and
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26 coercive questioning techniques on the likelihood of participants making a false confession.
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28 As the variable 'questioning technique' contained more than two levels, the non-leading
29
30 question condition was selected as a baseline group against which the other groups were
31
32 compared. The model containing the predictors was statistically significant, $\chi^2(4, N = 120)$
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34 = 10.47, $p = .033$ indicating that it differentiated participants who signed the false confession
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36 from non-confessors. The model accounted for between 8.4% and 11.8% of the variance in
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38 behaviour when asked to sign a false confession and correctly classified 71.7% of cases. One
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40 predictor (repetitive questioning) made a statistically significant contribution to the model
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42 (see Table 4). Each unit increase in repetitive questioning was associated with a decrease in
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44 the odds of making a false confession by a factor of .171 (95% CI .05-.62).
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51 Insert Table 4 here
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Effect of interviewer manner and questioning technique on perceived pressure to confess

To examine whether interviewer manner and questioning technique influenced perceptions of pressure to confess, a 2 (stern vs. friendly) x 4 (minimisation vs. repetitive questioning vs. leading questions vs. non-leading questions) between-groups ANOVA was conducted. Neither interviewer manner nor questioning technique influenced the ratings of pressure to confess: $F(1, 112) = 1.18, p = .279$ and $F(3, 112) = .57, p = .634$ respectively. The interaction between interviewer manner and questioning technique was not significant: $F(3, 112) = 1.01, p = .391$. Mean ratings for perceived pressure to confess per experimental condition are shown in Table 5. Further analysis using an independent samples *t*-test revealed that false confessors rated perceived pressure to confess significantly higher than non-confessors: $t(118) = 2.64, p = .009, \eta^2 = .06$.

Insert Table 5 here

False confessions obtained per interviewer

Table 6 shows the number of false confessions obtained per interviewer. Due to the low number of false confessions elicited by Interviewer 2, statistical analysis was not possible.

Insert Table 6 here

Discussion

The present study represents a first attempt to examine the combined effects of questioning techniques and interviewer manner on false confessions. Almost a third of the participants signed a false confession, and the majority of those confessed immediately when presented with their statement. In the current study participants appeared to confess despite a lack of

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3 incriminating evidence, in the absence of extreme pressure, and despite being unaware of any
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5 consequences of confessing. It was hypothesised that coercive questioning and a stern
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7 interviewer manner would elicit more false confessions and higher ratings of perceived
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9 pressure to confess than non-coercive questioning and a friendly interviewer manner.
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11 However, contrary to predictions, in the current study the non-leading question condition
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13 appeared to elicit the greatest number of false confessions.
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18 The non-leading question condition was characterised by a lack of coercive tactics and
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20 included the use of open-ended questions designed to discover ‘the truth’. Nevertheless, non-
21
22 coercive questioning techniques can be psychologically manipulative. Indeed, if participants
23
24 in this questioning condition felt at ease, this may have heightened a perception of trust
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26 between interviewee and interviewer, thereby possibly increasing vulnerability to complying
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28 with the request to sign the false confession. While coercive tactics including minimisation
29
30 may encourage innocent suspects to confess (e.g., Blair, 2005; Klaver et al., 2008, Russano et
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32 al., 2005), the present results therefore suggest that, under certain conditions, false
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34 confessions may occur in the absence of intimidating and coercive tactics. Further research is
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36 therefore advised to examine systematically the extent to which, and in which contexts, non-
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38 coercive questioning techniques may result in the elicitation of false confessions.
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44 Results indicate further that repetitive questioning elicited significantly fewer false
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46 confessions in comparison with non-leading questions. The inference of guilt conveyed by
47
48 repeatedly asking participants if they had taken a voucher may have provoked defiance
49
50 thereby encouraging continued denial of theft. Alternatively, if participants felt aggrieved
51
52 rather than intimidated by the frequent challenging of their responses, an adversarial
53
54 interaction may have unwittingly occurred (Russano, Narchet, & Kleinman, 2014) thereby
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3 possibly reducing the likelihood of responses being altered and false confessions being
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5 obtained.
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10 Despite the coercive nature of repetitive questioning (e.g., Alison, Kebbell, & Leung,
11 2008), which is attributed to verified false confession cases (St-Yves & Deslauriers-Varin,
12 2009), the current findings suggest that repetitive questioning may have an antagonistic
13
14 effect. From this perspective, it appears that repetitive questioning may increase resistance to
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16 altering responses thereby reducing the risk of false confessions. The current finding was
17
18 unexpected and further research examining repetitive questioning as a predictor of false
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20 confessions appears warranted.
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27 Minimisation was not a significant predictor of false confessions in the present study.
28
29 However, providing support to previous findings, (e.g., Klaver et al., 2008; Narchet et al.,
30 2011; Russano et al., 2005), the use of minimisation appeared to elicit false confessions.
31
32 Participants in this condition, who were most likely unaware of this subtle form of
33
34 persuasion, may have believed that the interviewer had their best interests at heart when
35
36 making comments such as “Don’t worry”. This proposition is supported by the finding that
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38 mean ratings of pressure to confess were lower in the minimisation condition than in the
39
40 repetitive questioning and leading question conditions, which suggests that participants were
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42 unaware of the use of coercion.
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49 While leading questions was not a significant predictor of false confessions, the use of
50
51 this tactic accounted for almost a quarter of the total false confessions obtained. Due to the
52
53 brief time lapse between the false accusation and the interview, memory for the event should
54
55 have been relatively accurate and therefore should have helped guard against the risk of
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3 yielding to leading questions (cf. Loftus, 2005). However, the coercive nature of leading
4 questions may have created uncertainty about the situation (Gudjonsson & Clark, 1986)
5 resulting in participants appearing to accept the suggestion that they were responsible for the
6 missing voucher. The present findings suggest that even if questioning occurs almost
7 immediately after an alleged incident, leading questions may create doubt about an event,
8 increase susceptibility to accepting suggestions and contribute to false confessions being
9 made.
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20 The finding that there was no significant main effect of interviewer manner on false
21 confessions may have been due to the experimental manipulations. In contrast to the findings
22 of the pilot study, in the main study significant differences in interviewer behaviour ratings
23 between the stern and friendly conditions were obtained for four behaviours only. In the pilot
24 study, participants rated the interviewers' behaviour after watching video recordings of a
25 simulated interview. In comparison, in the main study, participants completed the behaviour
26 rating scale after the confederate interviewed them about an alleged theft. In the main study,
27 the potentially stressful nature of the situation may therefore have contributed, for example,
28 to the more negative perceptions of the friendly interviewer when rating behaviours such as
29 'firm', 'warm' and 'authoritative', thereby explaining the lack of effect of interviewer manner
30 on false confessions. Additionally, several of the behaviours listed in the behaviour rating
31 form describe similar demeanours (e.g., assertive, confident, authoritative). Reducing the
32 number of behaviours being measured in future studies may consequently facilitate the
33 interpretation of findings.
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52 Nevertheless, it is noteworthy that in the current study a stern interviewer manner
53 elicited fewer false confessions than a friendly interviewer manner. It has been proposed that
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3 exposure to a stern interviewer manner may result in the application of inappropriate pressure
4 (e.g., Baxter, 2004) and increase the psychological distance between an interviewee and
5 interviewer (e.g., Bain & Baxter, 2000), thereby heightening the risk of obtaining a false
6 confession (e.g., Baxter & Boon, 2000). However, the present findings suggest that exposure
7 to an interviewer perceived as hostile and rude may increase resistance to making a false
8 confession. Thus, in the present study, the stern manner, which appears to have elicited
9 feelings of annoyance and disrespect appears to have reduced the likelihood of cooperation
10 when asked to sign a false confession (cf. Holmberg & Christianson, 2002).
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22 Data analysis found no significant effect of interviewer manner and questioning
23 technique on pressure to confess. While this finding was unexpected, it is noteworthy that
24 mean ratings for pressure to confess were higher in the stern, coercive questioning conditions
25 in contrast to the friendly coercive questioning conditions. Also, of note is the finding that
26 participants in the friendly non-leading question condition rated pressure to confess higher
27 than participants in most of the other questioning conditions (see Table 5). It is possible that,
28 in the friendly non-leading question condition, an informal and understanding interviewer
29 manner combined with a lack of coercive questioning created a more subtle, or covert, form
30 of psychological manipulation resulting in participants experiencing pressure to cooperate
31 with the request to sign the false confession. Meriting further investigation, this finding
32 suggests that interactions between interviewer manner and questioning technique should not
33 be discounted when considering perception of pressure to confess.
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50 When interpreting the present results several factors should be borne in mind
51 which may limit the extent to which the findings generalise to other contexts and
52 populations. First, in comparison with police suspects, participants could terminate the
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3 interview at any point and they did not run the risk of encountering any longer-term negative
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5 consequences due to falsely confessing. Second, the confederates were aware of the aims of
6
7 the research, which may have influenced their behaviour in ways other than intended. Third,
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9 although each confederate received the same training and adopted a uniform approach to
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11 interviewing, the percentage of false confessions obtained per interviewer (relative to the
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13 number of interviews conducted), varied considerably. The influence of interpersonal
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15 dynamics, which were not controlled for, might therefore explain the variation in the
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17 number of false confessions obtained to a degree. Factors such as the relationship between
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19 the interviewer and interviewees' age and gender may have mediated the interpersonal
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21 relationship and influenced the outcome of the interview. For example, while the
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23 participants' experience was subjective, a nineteen-year-old female false confessor said she
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25 felt intimidated being interviewed by an older man. In contrast, a forty-year-old male non-
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27 confessor said he was "Not at all concerned or intimidated" while being interviewed by a
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29 much younger man. Lastly, as the sample size was small, and would have limited the
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31 statistical power, future research using a larger sample is required.
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38 In conclusion, the present findings suggest that false confessions may arise following
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40 exposure to both non-coercive psychologically manipulative techniques and coercive
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42 interview techniques. The use of friendly interviewer manners during the interrogation of
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44 suspects, found to be associated with the elicitation of false confessions in the current study,
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46 may have implications for the design of investigative interviews. With this in mind, the
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48 present findings may be particularly relevant in the UK where the PEACE model of
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50 interviewing recommends the use of non-leading, open-ended questions (Soukara et al., 2009;
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52 Walsh & Bull, 2012), and rapport-building (Meissner et al., 2014) to facilitate the
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54 information-gathering approach.
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3 Furthermore, in addition to considering the role of questioning techniques and
4 interviewer manners in eliciting false confessions, possible interactions between different
5 interview techniques as well as the age and gender of interviewers and interviewees may
6 contribute to outcomes and warrants further examination. Overall, it is important that findings
7 of current and previous research are reflected in training procedures, and that research efforts
8 are continued to identify risk factors for false confessions. Implementing procedures, which
9 help reduce the likelihood of suspects' statements subsequently being found to be erroneous,
10 will not only offer protection for suspects and interviewing officers but will also help target
11 police resources appropriately.
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Table 1 *Pilot study: Mean behaviour ratings by interviewer manner*

	Interviewer manner			
	Stern		Friendly	
	M	SD	M	SD
Nervous	1.98	1.18	2.25	1.12
Severe**	3.98	.87	1.96	.82
Friendly**	1.27	.63	2.94	.96
Understanding**	1.65	.80	2.60	1.07
Assertive**	3.73	.97	2.92	1.06
Confident	3.52	1.02	3.02	.92
Professional	2.71	1.11	3.29	1.26
Firm**	4.00	.87	2.83	.96
Respectful**	2.02	.87	3.13	1.19
Positive**	1.67	.88	2.77	1.02
Formal	3.46	.98	3.00	1.07
Warm**	1.23	.47	2.40	1.03
Stern**	4.04	1.01	2.35	.93
Organised	3.25	.88	3.13	.93
Effective	2.77	1.08	2.94	1.14
Authoritative**	3.88	1.08	2.46	.94
Competent	3.12	.81	3.12	1.06
Negative**	3.90	.97	2.40	1.03

**p<.001

Table 2 *Main Study: Mean behaviour ratings by interviewer manner*

	Interviewer manner			
	Stern		Friendly	
	M	SD	M	SD
Nervous	1.68	.91	1.80	.93
Severe*	3.40	1.15	2.77	1.00
Friendly**	1.53	.79	2.43	1.03
Understanding**	1.78	.90	2.42	1.01
Assertive	3.85	1.07	3.50	1.00
Confident	4.08	.85	3.80	.88
Professional	3.73	1.19	3.85	.84
Firm	4.13	.91	3.80	.93
Respectful	2.53	1.17	3.12	.96
Positive	2.08	1.15	2.57	1.05
Formal	4.23	.94	4.18	.68
Warm	1.50	.68	1.93	.90
Stern*	3.83	1.08	3.15	1.10
Organised	3.62	1.01	3.50	.95
Effective	3.30	1.17	3.25	1.08
Authoritative	4.15	.88	3.70	.98
Competent	3.55	1.00	3.43	.96
Negative	3.35	1.29	2.83	1.17

* p<.05

**p<.001

Table 3 *False confessions by experimental condition*

Questioning technique	Interviewer manner		Total
	Friendly	Stern	
Non-leading questions	9	5	14
Leading questions	4	5	9
Repetitive questioning	2	2	4
Minimisation	7	3	10
Total	22	15	37

Table 4 *Logistic regression assessing interviewer manner and questioning techniques as predictors of false confessions*

	B	S.E.	Wald	df	p	Odds Ratio	C.I. (95%)	
							Lower	Upper
Interviewer manner	-.592	.416	2.028	1	.154	.553	.245	1.249
Non-leading v leading	-.728	.547	1.775	1	.183	.483	.165	1.409
Non-leading v repetitive	-1.767	.656	7.267	1	.007	.171	.047	.617
Non-leading v minimisation	-.571	.539	1.125	1	.289	.565	.197	1.623
Constant	.160	.422	.143	1	.706	1.173		

Table 5 *Mean ratings for perceived pressure to confess by experimental condition*

Questioning technique	Interviewer manner			
	Friendly		Stern	
	M	SD	M	SD
Non-leading questions	4.53	3.38	3.47	3.36
Leading questions	3.87	2.72	5.20	3.47
Repetitive questioning	3.93	2.66	5.40	3.13
Minimisation	3.33	3.60	4.13	3.04

Table 6 *Number of false confessions obtained per interviewer*

	False confessions obtained	Expressed as a % of interviews conducted	Expressed as a % of total false confessions obtained
Interviewer 1	13	41%	35%
Interviewer 2	4	33%	11%
Interviewer 3	13	42%	35%
Interviewer 4	7	16%	19%