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**Evaluating the benefits of a rapport-based approach to investigative interviews:
A training study with law enforcement investigators**

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Abstract

Objectives: The purpose of this study was to test the effectiveness of a rapport-based approach to interviewing that includes productive questioning skills, conversational rapport, and relational rapport building tactics.

Hypotheses: We predicted that training police investigators in a rapport-based approach would significantly increase the use of rapport-based tactics, and that such tactics would directly influence the interview subject's perceptions of rapport and indirectly lead to increased cooperation and disclosure of information.

Method: We trained federal, state, and local law enforcement investigators ($N = 67$) in the use of evidence-based interviewing techniques. Both prior to and subsequent to this training, investigators interviewed semi-cooperative subjects ($N = 125$). Interviews were coded for the use of various interview tactics, as well as subject disclosure. Participants also completed a questionnaire regarding their perceptions of the interviewer and their decision to cooperate with the interviewer.

Results: Evaluations of the training were positive, with high ratings of learning, preparedness to use tactics, and likelihood of use following the training. In post-training interviews, investigators significantly increased their use of evidence-based tactics, including productive questioning, conversational rapport, and relational rapport building tactics. Structural equation modeling demonstrated that investigators' use of the evidence-based interview tactics was directly associated with increased perceptions of rapport and trust, and indirectly associated with increased cooperation and information disclosure.

Conclusions: We demonstrated that rapport-based interview tactics could be successfully trained, and that using such tactics can facilitate perceptions of rapport and trust, reduce participants' resistance to cooperate, and increase information yield.

Public Significance Statement: Practitioners often criticize a rapport-based approach for its lack of efficacy with resistant interview subjects. This study finds that after a two-day training, experienced law enforcement investigators were able to employ tactics to build rapport and establish cooperation with a reluctant subject, which in turn produced more information. This adds to mounting empirical support for the use of evidence-based practices in the interview room.

Keywords: Interrogation, investigative interview [training], rapport, evidence-based interviewing

Evaluating the benefits of a rapport-based approach to investigative interviews:

A training study with law enforcement investigators

Policing is unlike many other fields of practice (e.g., medicine) in that historically researchers and practitioners do not consistently collaborate (Weisburd & Neyroud, 2011). As a prominent example, interviewing techniques have, for more than 50 years, been based upon customary knowledge – developed through practitioner experience and informed by anecdotal evidence (Hartwig, Meissner et al., 2014). This lack of empiricism has prolonged the use of a coercive accusatorial approach for suspect interviewing that is not the most effective at eliciting accurate and actionable information (Meissner et al., 2015). In contrast, a growing body of research has demonstrated the effectiveness of an information-gathering, rapport-based approach for eliciting information (Meissner et al., 2015) while safeguarding against false confessions (Meissner et al., 2014). However, many of these tactics were developed and evaluated in a laboratory setting (see Meissner et al., 2014; Meissner, Surmon-Böhr et al., 2017). In the current paper we bridge this gap between research and practice by evaluating a training program focused on the use of rapport building tactics. Both before and after receiving this training, law enforcement investigators conducted an interview with a semi-cooperative subject. We assessed whether investigators were more likely to use the rapport building approaches we trained them in, and whether such tactics were effective in developing rapport, establishing the cooperation (and overcoming the resistance) of interview subjects, and eliciting information of investigative value.

Accusatorial Interviewing Approach

Many interrogators in North America have received training in an accusatorial approach to interviewing suspects (Kassin et al., 2007; Kelly & Meissner, 2015). Once a subject is

suspected of guilt, accusatorial interviews attempt to secure a confession by exerting control, manipulating a subject's perception of the evidence against them, and suggesting the potential benefits of providing a confession (Kassin, 2012). It is often difficult for a subject to provide their own narrative in this context, given the implication of guilt and the coercive nature of the questioning that this approach places an emphasis on (i.e., asking closed-ended and suggestive questions, interrupting a subject's objections or denials). Decades of field studies (e.g., analyses of wrongful convictions, Garrett, 2015) and laboratory research (e.g., experimental studies evaluating the dangerous potential of specific tactics; Kassin & Kiechel, 1996; Russano et al., 2005) have demonstrated that accusatorial tactics can lead to false confessions (for review see Kassin et al., 2010; Meissner et al., 2014) and unreliable information (e.g., Evans et al., 2013). Given the problematic nature of current practice, there is a need to develop alternative, evidence-based methods for interviewing both cooperative and uncooperative subjects. Absent a compelling alternative, it has proven difficult to convince law enforcement to alter their tactics, particularly when interviewing resistant subjects.

Information-Gathering Interview Approach

Researchers have begun to test an effective alternative to accusatorial practices. Referred to as an information-gathering approach, it encompasses tactics that focus on information elicitation and rapport building, with the goal of eliciting accurate and actionable information from a subject (rather than a confession; for review, see Meissner et al., 2015, Meissner, Surmon-Böhr, et al., 2017). A number of countries now utilize this approach to interview both cooperative and uncooperative subjects (e.g., the U.K., Walsh & Milne, 2008; Norway, Fahsing & Rachlew, 2013; New Zealand, Westera et al., 2017). Observational research conducted in the field (e.g., Alison et al., 2013; Brandon et al., 2019; Kelly et al., 2016) and laboratory research

attempting to experimentally demonstrate the effects of productive questioning (Griffiths & Milne, 2006; Powell et al., 2005) and rapport building (e.g., Brimbal et al., 2019; Wachi et al., 2018) have supported the use of this approach, including the benefits of an information-gathering approach for eliciting more information from a subject (Evans et al., 2013). A meta-analysis of laboratory studies indicates that such an approach leads to more diagnostic outcomes when compared with an accusatorial approach (Meissner et al., 2014). Recent research has also evaluated tactics to develop rapport and trust with a resistant subject and achieve cooperation (Brimbal, Kleinman et al., 2019). Given practitioners' concerns regarding the effectiveness of an information gathering approach with resistant subjects, the current study assessed whether these tactics could be effectively trained to experienced investigators.

Building Rapport in Interviews

Rapport is a central component of an information-gathering approach, albeit difficult for interviewers to define (Russano et al., 2014; Vallano et al., 2015) and conceptualized in different ways throughout the literature (see Vallano & Schreiber-Compo, 2015). Here we adopt a broad conception that characterizes the relationship between the interviewer and subject with a generally positive exchange (Tickle-Degnen & Rosenthal, 1990), attentiveness towards one another's concerns (Kleinman, 2006), and the importance of developing respect and trust (Duke et al., 2018). In the current training, we provided investigators with evidence-based strategies and tactics for conducting a rapport-based interview. Trainers presented productive questioning tactics as the foundation of an effective information gathering interview, followed by conversational rapport tactics (developed from motivational interviewing; Alison et al., 2013) and relational rapport tactics as tools to overcome resistance and obtain cooperation

(conceptualized as the other side of the same coin, Kelly et al., 2016). We detail each of these sets of tactics below.

Productive Questioning Tactics

As noted by Griffiths and Milne (2006), the use of productive questions is critical to the collection of information but also foundational for the development of rapport and cooperation (Kelly & Valencia, 2020). Productive questions involve the use of open-ended questions (Clarke & Milne, 2001; Snook et al., 2012; Walsh & Bull, 2010), but discourage the use of closed-ended and leading questions, or interruptions, as these can interfere with a subject's memory (Fisher & Geiselman, 1992) and prevent the subject from explaining their version of events. Further, productive questioning tactics can include the use of affirmations, reflections, and summaries that demonstrate active listening and encourage further conversation (Miller & Rollnick, 2013). Affirmations involve highlighting a subject's constructive statements, attributes, or experiences (e.g., "I appreciate your honesty") and encourage similar contributions. Reflections (e.g., repeating back to the subject certain words or phrases and/or sharing observations relating to the subject's emotion state) and summaries (i.e., offering back a concise, yet detailed, encapsulation of what the subject has said) demonstrate that the interviewer has listened to the subject and offered an opportunity for correction of the statement or transition within the interview. Researchers have demonstrated the importance of such tactics for the development of cooperation and the elicitation of information in forensic interviews (e.g., Alison et al., 2013; Alison et al., 2014; Kelly & Valencia, 2020).

Conversational Rapport Tactics

Conversational rapport establishes the tone for a productive interaction throughout an interview. To generate rapport in this way, an interviewer needs to use skilled elicitation and

active listening tactics to demonstrate respect and interest for the subject (e.g., Alison et al., 2013; Alison et al., 2014). Conversational rapport techniques are drawn from Motivational Interviewing (Miller & Rollnick, 2013) and include demonstrations of autonomy, adaptation, evocation, acceptance, and empathy. Offering a subject autonomy involves allowing them to provide their own account of an event absent pressure or direction from the interviewer, and to do so in the order and level of detail they feel most comfortable. Adaptation – the ability to adjust questioning based on a subject’s responses – can facilitate perceived autonomy and encourage a free-flowing interview context. Evocation involves drawing-out a subject’s emotions and motivations during the interview, paving the way for acceptance and demonstrations of empathy. Indeed, if the interviewer successfully evokes what a subject is feeling in the moment or why they are demonstrating resistance, they can offer acceptance and empathetic prompts that demonstrate a non-judgmental tone.

Relational Rapport Building Tactics

Finally, researchers have evaluated a variety of what we refer to as relational rapport building tactics (e.g., Brimbal, Dianiska et al., 2019; Goodman-Delahunty & Howes, 2016; Houston et al., 2017). These tactics can be distinguished from conversational rapport in that they are not specifically linked to the questioning process. Relational techniques generally attempt to build rapport by facilitating a relationship between the interviewer and subject through the exchange and validation of personal information. For example, self-disclosure on the part of the interviewer can increase rapport, while prompting self-disclosure from the subject (Dianiska et al., 2020; Goodman-Delahunty et al., 2014). Highlighting similarities between themselves and the subject (Brimbal, Dianiska et al., 2019) or offering affirmations (shining a positive light on a subject’s self-esteem by underlining positive aspects of their identity) or verifications (displays

of an accurate understanding of the subject's self-concept -whether positive or negative) can also increase rapport (Davis et al., 2016; Dianiska et al., 2020). Trust tactics that engage reciprocity, such as offering a bottle of water or food (Matsumoto & Hwang, 2018) or providing information or assistance to someone (Brimbal, Kleinman et al., 2019), can increase the elicitation of information through increased perceptions of trust. While trust and rapport have been distinguished from one another in the literature, they have also been conceptualized within the same construct (see Duke et al., 2018). The current study takes this latter approach and assesses interview subjects' perceptions of overall rapport with the interviewer.

Modeling Rapport, Cooperation, and Disclosure

From a theoretical perspective, the mechanism by which rapport tactics influence information disclosure has been conceptualized as mitigating a subject's resistance and increasing the likelihood that a subject will cooperate with an interviewer (cf. Brimbal et al., 2019; Kelly et al., 2016). Certain interview tactics directly increase the disclosure of information – for example, elements of the Cognitive Interview, such as context reinstatement instructions, can directly increase the amount of information provided by a subject (Dianiska et al., 2019; Memon et al., 2010). However, rapport and trust-building tactics are less likely to directly influence information disclosure; instead, such tactics influence a subject's willingness to cooperate with an interviewer's questioning. Hence, studies have shown that the use of rapport tactics increase a subject's perception of rapport with the interviewer, leading to an increased likelihood that the subject decides to cooperate (see Brimbal, Kleinman et al., 2019). This mediational model has found support in several laboratory (e.g., Brimbal et al., 2019; Dianiska et al., 2019) and field studies (e.g., Brandon et al., 2019), and is one that we further validate in the current research (see Figure 1). The current study evaluates whether training an information-

gathering approach focused on rapport and trust might facilitate perceptions of rapport post-training, and indirectly influence the decision to cooperate / resist and the amount of information disclosed.

Training of Evidence-Based Interviewing Tactics

A handful of studies have evaluated the effects of training investigators in information-gathering approaches to interviewing (for a review, see Russano et al., 2019). For example, the PEACE model, an information-gathering approach implemented in the U.K. in the early 1990s, has been evaluated on several occasions demonstrating mixed results. McGurk and his colleagues (1993) found that PEACE trained officers' skills in actual interviews improved post-training when assessed both immediately and six months later. Griffiths and Milne (2006) also evaluated an advanced three-week course, demonstrating both a significant increase in the use of good tactics and that the use of these tactics transferred to the real world, with some degree of skill erosion over time. In contrast, others have found less improvement of interviewing practices when evaluating a PEACE training model (Clarke et al., 2011; Griffiths et al., 2011); for example, Walsh and Milne (2008) found no significant improvement in the use of rapport building skills and shortfalls in the extent to which interview subject's account was explored.

Our research contributes to the literature in two important ways. First, training evaluation studies in the published literature, particularly those involving the PEACE framework as trained in the U.K., were conducted prior to much of the empirical laboratory research that has supported the use of the specific rapport building tactics incorporated herein (cf. Meissner et al., 2017). Further, no prior training studies have assessed how the adoption of rapport tactics by practitioners might directly influence an interview subject's perceptions of rapport and decision to cooperate, or the objective assessment of information yield (given ground truth). While there

is substantial utility in evaluating the use of evidence-based tactics in real-world contexts (cf. Brandon et al., 2019; Russano et al., 2019), the inability to determine ground truth and to exert some degree of control over case factors and interview context can create challenges for interpreting the efficacy of training and interview methods. As such, the current study comprises one of the first systematic evaluations of a rapport-based approach to investigative interviewing and assesses the effectiveness of such tactics for establishing cooperation and eliciting information both prior to and following a training intervention.

Second, accusatorial approaches are the predominant practice among U.S. law enforcement (Kelly & Meissner, 2015), and no published research has yet to assess the efficacy of training U.S. law enforcement in an alternative, information gathering approach that focuses on the use of rapport-based tactics. Given concerns expressed by practitioners related to the perceived insufficiency of such approaches for overcoming resistance, and the selective adoption of evidence-based practices often associated with a “toolbox” approach (see Snook et al., 2020), it is critical to assess the extent to which an information gathering approach might be perceived as useful and adopted by practitioners.

The Current Study

Given the prevalent use of accusatorial interviewing tactics by law enforcement in the U.S. (Costanzo & Redlich, 2010; Leo, 2008), and the difficulty of implementing evidence-based changes to long-held law enforcement procedures more generally (e.g., Bayley, 1998; Lum et al., 2012), it is imperative that scholars offer compelling, empirically-supported demonstrations of a rapport-based approach to interviewing. The current study addressed this via a quasi-experimental field study in which we evaluated interviewing skills and key interviewing outcomes under controlled conditions. U.S. law enforcement investigators conducted interviews

before and directly after completing a two-day rapport-based interview training. We evaluated the influence of training by assessing interview subjects' impressions of the interviewer (i.e., perceptions of rapport), the interviewer's behavior and adherence to rapport-based tactics, and the direct and indirect effects of these variables on key interview outcomes (i.e., cooperation and disclosure). We hypothesized that training would significantly increase the use of rapport-based tactics, and that such tactics would directly influence the interview subject's perceptions of rapport and indirectly lead to increased cooperation and disclosure of information.

Pilot Study

A pilot sample of 11 state and local law enforcement investigators first experienced the proposed training and completed all experimental interview tasks. Investigators in this sample were 54.54% female, aged between 28 and 52 ($M = 40.80$, $SD = 8.35$), and 81.82% White/Caucasian. The sample was fairly experienced with an average of 13.60 years on the job ($SD = 9.00$), and a majority (63.64%) estimated having conducted between 100 and 1,000 interviews, with 18.18% ($n = 2$) less than 100 and 9.09% ($n = 1$) greater than 1,000 interviews. Feedback from this sample of investigators allowed us to improve both the training content (e.g., which topics to spend more time on to ensure effective comprehension) and the format of practical exercises (e.g., which exercises were most helpful, what topics might require more practice and feedback from instructors). Responses (on scales ranging from 1 to 7) from pilot participants indicated that they believed the techniques were highly useful to develop cooperation and elicit information from interview subjects ($M = 6.44$, $SD = .56$), that they would be likely to use these techniques in the field ($M = 6.47$, $SD = .63$), and that they felt well prepared to use the training ($M = 5.93$, $SD = .80$). Participants in our pilot sample significantly increased their use of productive questioning tactics ($t(10) = 4.06$, $p < .005$, $d = 1.23$, 95% CI

[0.32, 2.28]) and conversational rapport tactics ($t(10) = 2.82, p < .05, d = 0.85, 95\% \text{ CI } [0.06, 1.95]$), but not their use of rapport building tactics ($t(10) = 1.02, p = .33, d = 0.31, 95\% \text{ CI } [-0.31, 0.91]$). Based upon the pilot study, the training program and experimental interview tasks were refined and improved to further encourage the adoption of rapport building tactics.

Method

Participants

We collected data from two sets of participants for this study: a sample of law enforcement investigators who underwent training and conducted two interviews, and a sample of community members who served as semi-cooperative sources for the interviews conducted by investigators. We conducted an *a priori* power analysis for small to medium training effects ($d = .35$) using a repeated measures design with .80 power, resulting in a target sample of 67. We recruited investigators through convenience sampling given several considerations: cost of travel for the research and training teams, as well as practical limits associated with the size of the training facilities and the collection of pre- and post-training interviews. Funding allowed us to conduct three training sessions, which included travel for the research team to two separate locations and the conduct of one training at the research team's university. We limited each training session to 25 investigators, leading to a target sample of between 60 and 75. We recruited community members as interview subjects for pre- and post-training interviews at each location.

Law Enforcement Investigators

We recruited three cohorts of investigators ($n_{s1} = 31; n_{s2} = 16; n_{s3} = 20$) from several state/local law enforcement agencies (46.27% of the total sample) and one federal law enforcement agency in the U.S. This resulted in a total sample of 67 investigators, 58 of whom

completed both the pre- and post-training interviews (2 interviewers only completed the post-interview and 7 interviewers only completed the pre-interview). All investigators provided their oral consent to participate. The final sample was 81.40% male, ranging in age from 26 to 58 ($M = 39.79$, $SD = 7.12$), with self-described race/ethnicity as 81.40% White, 10.20% Black, 6.80% Hispanic, and 1.70% Asian. Investigators were rather experienced with an average of 13.59 years on the job ($SD = 6.77$). More than half (54.70%) estimated that they had conducted between 100 and 1,000 interviews, followed by 14.50% who had conducted more than 1,000, and 11% who had conducted fewer than 100 interviews. Exploratory analyses indicated that professional experience (both in years and number of interviews conducted) had no effect on any of the primary outcome variables.

Community Members

Individuals who were interviewed by investigators ($N = 125$) were recruited via university postings and Craigslist at the three corresponding locations. Participants ranged in age from 18 to 62 ($M = 25.75$, $SD = 9.75$), 55.20% were female, and self-reported racial/ethnic identity included 64.80% White, 18.40% Hispanic, 4.00% Black, 3.20% Asian, and 6.40% mixed or other. Each participant was paid \$15 and was entered into a drawing to win a \$50 gift card at each training site.

Procedures

Training

We provided investigators with a two-day training on an empirically supported, rapport-based model of interviewing. This training model was independently delivered to each of the three cohorts. The trainers were two experienced interviewing professionals (SMK and ELP) who were familiar with both the science and practice of a rapport-based approach. Training

included lectures, discussions, and practical exercises. Specific training elements included asking productive questions (e.g., using a funnel structure – starting broad and carefully narrowing the focus; avoiding leading, suggestive, or closed-ended questions; engaging in active listening; providing affirmations and reflective listening prompts; offering summaries) and using conversational rapport (e.g., using evocation to demonstrate empathy; supporting the interview subject’s autonomy, etc.). We also provided investigators a framework with which to understand and manage a subject’s resistance and trained them to utilize specific relational rapport-based tactics aimed at enhancing cooperation and eliciting information. At the conclusion of the training and following completion of their post-training interviews, investigators ($N = 60$) responded to an assessment of the course that included 7-point Likert scales evaluating their pre-training familiarity with the information-gathering tactics, the likelihood that they might use that tactics in the future, and the extent to which they felt prepared to use the tactics.

Pre- and Post-Training Interviews

Interviewers. Investigators conducted interviews both immediately prior to training and directly following the completion of training. We randomly assigned each investigator to a scenario (i.e., assassination or bombing, counterbalanced) for their pre-training interview, and they received the alternative scenario for their post-training interview. We gave investigators between 10 and 20 minutes to prepare for the interview and provided them with background about the alleged plot and the subject (i.e., alias, cause supported). Once they had prepared for the interview, each investigator conducted a 20-minute interview. We imposed a 20-minute time limit to standardize across interviewers and due to logistical and time constraints (a limited number of interview rooms were available; pre- and post-interviews were conducted within a 2-3 hour window). A researcher notified investigators when 5 minutes remained in the interview by

knocking on the interview room door. They were instructed to conclude the interview naturally when they heard the knock. We recorded interviews with the consent of both the interviewer and interviewee. Following completion of each interview, investigators responded to a questionnaire related to their perceptions of the interviewee, the tactics they deployed, and their success in eliciting relevant information.

Interview subjects. We recruited community members to participate as interview subjects. Upon arrival to the training location, individuals were provided with informed consent and were instructed that they would be participating in a study about interviewing. Through a Qualtrics survey, participants then provided some personal background information (e.g., where they were born, what they wanted to do after college or what their current occupation was, etc.), and selected an alias to be known as during the study – a name that had some personal meaning (e.g., a nickname, a pet's name) yet allowed them to maintain anonymity. Participants then rated their attitudes regarding five controversial subjects/causes (i.e., abortion, gun rights, Black Lives Matter, gay marriage, and climate change) using a four-point scale (e.g., strongly support the pro-life movement to strongly support the pro-choice movement) and identified which belief/cause they felt most strongly about. We then asked them to think about a very close friend who shared the same belief they had rated as most important. These questions allowed us to tailor the scenario to each participant's personal experiences and to plausibly incorporate another individual that they were close to. Researchers transmitted this information to the interviewers so they could prepare for their interview while the community member went through the information management dilemma.

Information management dilemma. After responding to the preliminary questionnaire, we presented the interview subjects with an information management scenario developed from

prior research (see Oleszkiewicz et al., 2014). We asked participants to imagine that they had joined a group in college that supported their top-rated belief/cause with the friend they had named. The group they joined was a peaceful group; however, their friend had been recruited by a radicalized off-campus faction of the group that was planning a terrorist attack. Their friend informed them that they had spoken to law enforcement but denied everything. We asked participants to imagine that as a result of their affiliation with the group and their friend, they themselves had been contacted by a law enforcement investigator asking about the plot and their friend's involvement. Further, the investigator suggested to them that they could secure a "deal" that would protect and exonerate both themselves and their friend.

We then presented participants with the key information management: they could only secure the deal if they provided their interviewer with a sufficient number of details about the plot – thus, they should strive to provide as much information as possible. However, participants were also cautioned that by providing too much information to the interviewer, they themselves could be viewed as complicit and considered an accessory to planning the attack. Hence, with this concern in mind, participants were encouraged to provide as little information as necessary. To increase participants' resistance, we raised their level of suspicion by informing them that the interviewer may or may not uphold the deal because they were not officially allowed to do so – in fact, the interviewer could simply take the information and leave them unprotected. To motivate participants and anchor the deal in something tangible, we provided interview subjects with a financial incentive (the possibility of being entered into a drawing for a \$50 gift card). All participants were, in fact, entered into the drawing and one participant per sample received the gift card. Importantly, interviewers were not made aware of this deal, but were simply charged with obtaining as much information about the plot as they could from the interview subject. The

deal was simply an artificial means with which to motivate subjects to display resistance and engage in information management.

Scenarios. Once participants confirmed that they understood the information management dilemma by correctly answering a series of questions, we gave them information about the terrorist attack (bombing or assassination plot). The quantity of information in either scenario was controlled (35 items each), and scenarios were personalized to include targets that were congruent with the cause that the participant supported (e.g., Greenpeace headquarters was going to be bombed; a high-ranking official for planned parenthood was going to be assassinated). Participants memorized the content of the scenario and responded to an open-ended memory test regarding the facts of the scenario. Once researchers verified that participants' responses were correct, the interview could begin. Following the interview, participants responded to several questions about their experience during the interview, including their impressions of the interviewer (e.g., perceptions of rapport) and their decision to cooperate or resist providing information. All materials for this study are in our supplemental materials on OSF.

Dependent Measures

Perceptions of Rapport with the Interviewer

A principal components analysis demonstrated that all items from the post-interview questionnaire measuring impressions of the interviewer loaded onto a single "rapport" factor that accounted for 29.3% of the variance. Twenty-two items with component loadings of .50 and above (considered strong loadings; Osbourne & Costello, 2004) were included in a final composite measure ($\alpha = .89$; all items, regardless of inclusion, are included in supplemental materials on OSF). This composite measure of rapport (e.g., "the interviewer was friendly"; "the

interviewer was interested in my point of view”; “the interviewer was empathetic towards me”) and trust (e.g., “The interviewer was capable”; “Most people that the interviewer interacts with would view his/her as trustworthy”) was created by averaging across items, with higher values indicating more positive impressions of the interviewer, on a scale from 1 (*not at all*) to 7 (*completely*).

Decision to Cooperate with the Interviewer

Participants rated their level of cooperation with and resistance to the interviewer (i.e., “How willing were you to provide the information that the interviewer specifically asked for?” and “How willing were you to provide additional details, even details beyond the interviewer’s questions?”). These items were significantly correlated ($r = .62, p < .001$). A composite measure of cooperation was created by averaging the responses, with higher values (on a scale from 1 to 7) indicating a more cooperative disposition towards the interviewer.

Coding of Interview Tactics

To assess the use of trained tactics by the interviewer, all interviews were coded by two blind, trained, and experienced researchers on scales from 0 (no use) to 5 (extensive use). This coding assessed productive questioning tactics by measuring the extent to which interviewers used open-ended, closed-ended, suggestive questions, or interruptions, and whether they used affirmations, reflective listening, or summaries. Coders also evaluated elements of conversational rapport related to core elements of motivational interviewing (see Alison et al., 2014), including whether the interviewer provided the subject with autonomy, behaved in a manner conducive to autonomy, offered acceptance (i.e., responded to the subject in a non-judgmental way), provided evocations (i.e., drawing out the subject’s perspective) and used evocative prompts, responded in an adaptive manner (e.g., allowing the conversation to evolve

according to the subject's responses), and displayed empathy. Coders assessed the use of trust-building tactics including acts of reciprocity (i.e., if the interviewer did something for the interviewee), the interviewer's genuineness in the trust offering, the (in)dependence of the act and any risk assumed by the interviewer (e.g., that the interviewer did not make explicit that if they did something for them they (the subject) should do something in return, and that through reciprocity they were taking a risk, respectively). Interviews were also coded for rapport-based tactics such as common ground, self-disclosure, showing concern for the interviewee's well-being, demonstrating interest in the subject as a person, whether they were respectful to the subject, and expressions of affirmation or verifying feedback in response to an interviewee's self-disclosure.

Coders met periodically to discuss their assessments with one another and the first author. Intraclass correlations (ICCs) were calculated for each item coded. Reliability across items was considered moderate to excellent (ICCs > .5; Koo & Li, 2016), ranging from .54 to .98, with an average ICC of .72 and only four falling below .60 (All items and details regarding their reliability are provided in supplemental materials on OSF). Items lower in reliability were concepts that are typically more difficult to operationalize (e.g., respect, autonomy) and that coders have previously shown moderate reliability with (see Alison et al., 2013). Discrepancies were resolved by averaging the two coders' scores for each variable. We then created three variables representing the core sets of interview tactics associated with the training (productive questions, conversational rapport, and relational rapport tactics) by averaging the frequency of use across tactics within each set.

Coding of Information Disclosure

Each community member received one of two scenarios, both of which involved 35 details (e.g., the name of the terrorist group, the date of the attack, etc.; for a full list of details, see supplemental materials). To assess disclosure, two trained and experienced coders – blind to specifics about the study irrelevant to their coding (e.g., hypotheses, and condition)– listened to the full set of interviews and assessed whether each of 35 details was not present or incorrect (0), present but vague (1; e.g., the attack will take place on the weekend), or present and specific (2; e.g., the attack will take place on Sunday). Incorrect details ($n = 8$) were included with not present details given that, practically speaking, an inaccurate detail would not be useful to an investigation. Coders established good agreement (ICC = .79 for the assassination scenario and ICC = .81 for the bombing scenario). We averaged coding from both coders and utilized this average score for analysis purposes.

Results

Evaluation of the Training

A total of 60 investigators completed post-training interviews and provided evaluative feedback on the training course. Table 1 provides descriptive statistics for investigators' assessments of the trained techniques. On a 7-point scale from 1 (*completely unfamiliar*) to 7 (*very familiar*), investigators reported being moderately familiar with the techniques before the training ($M = 4.35$, $SD = 1.46$). Investigators' ratings of the likelihood of use ($M = 6.37$, $SD = 0.62$) and preparedness to use the techniques ($M = 5.89$, $SD = 0.74$) were fairly high. We only observed differences between techniques on the likelihood of future use rating, $F(4, 55) = 8.96$, $p < .001$, $\eta^2_p = .13$, such that investigators reported being least likely to use the funnel structure of questions ($M = 6.07$, $SD = 1.00$) and most likely to use rapport-building tactics ($M = 6.59$, $SD = .65$).

Investigators also responded to an open-ended prompt regarding topics they would like to receive further training on. They overwhelmingly indicated that they wanted to know more about resistance (41.7%), despite the fact that rapport and trust building tactics were aimed at overcoming resistance. Other responses included productive questioning skills (18.3%; e.g., more focus on open-ended questions, question phrasing), assessing veracity/deception (16.7%), and evidence presentation tactics (16.7%).

Semi-Cooperativeness

Participants were incentivized to be semi-cooperative through the promise of a deal for them and their friend -that the interviewer was in fact unaware of. It appears that our manipulation worked in that, on average, our participants ($N = 125$) were fairly reluctant to provide information ($M = 12.26$, $SD = 6.22$, from a total of 35 potential details). Furthermore, subjects were above the mid-point (on scales from 1 to 7) when reporting their motivation to balance what information to reveal and not to reveal ($M = 4.82$, $SD = 1.79$).

Effect of Training on use of Key Outcome Measures and Evidence-Based Interview Tactics

To control for differences across the three training cohorts and between the two interview scenarios, we used Generalized Estimated Equations (GEE) to evaluate the effects of training (pre- vs. post-training), with training cohort as a predictor and scenario as a covariate. Neither cohort nor scenario yielded significant effects on key outcome measures. We included all investigators ($N = 67$) and interviews ($N = 125$) in these analyses. Cohen's d (with 95% CI) is presented as a measure of the training effect size for each outcome variable.

Rapport, Cooperation, and Disclosure

We assessed the effects of training on self-reported perceptions of rapport with the interviewer, and key outcomes of cooperation and information disclosure (descriptive statistics

are displayed in Figure 2). Training produced a significant increase in perceived rapport by the interview subject, $\chi^2(1, N = 67) = 3.87, p = .049, d = 0.49, 95\% \text{ CI } [0.001, 0.99]$. In contrast, the direct effect of training was non-significant for measures of cooperation, $\chi^2(1, N = 67) = 0.25, p = .62, d = 0.12, 95\% \text{ CI } [-0.36, 0.60]$, and information disclosure, $\chi^2(1, N = 67) = 1.87, p = .17, d = 0.20, 95\% \text{ CI } [-0.16, 0.55]$.

Interview Tactics

We also evaluated the use of training by grouping the coded tactics into three categories consistent with the training provided: productive questioning tactics, conversational rapport, and relational rapport building tactics. Descriptive statistics for each category of tactics are displayed in Figure 3 (and descriptive statistics for each individual tactic coded are included in supplemental materials on OSF). The effect of training on productive questioning tactics was significant, $\chi^2(1, N = 67) = 15.60, p < .001, d = 1.10, 95\% \text{ CI } [0.56, 1.65]$, with an overall improvement in questioning techniques following training. The effect of training was also significant for conversational rapport tactics, $\chi^2(1, N = 67) = 13.96, p < .001, d = 1.03, 95\% \text{ CI } [0.49, 1.56]$, such that the use of these tactics increased post-training. Finally, investigators also demonstrated a significant effect of training on relational rapport tactics, $\chi^2(1, N = 67) = 4.32, p = .038, d = 0.53, 95\% \text{ CI } [0.03, 1.02]$, with an increased use of relational rapport building tactics post-training.

Direct and Indirect Effects of Training on Rapport, Cooperation, and Disclosure

Prior research has suggested that rapport tactics are most likely to directly influence perceptions of rapport with the interviewer, and to indirectly influence measures of cooperation and information disclosure (see Brimbail et al., 2019; Dianiska et al., 2019). A mediated model was estimated to test the indirect effect of training and the use of rapport building tactics on

cooperation and disclosure using Mplus version 7.2. As displayed in Figure 4, training was used to predict a latent variable pooling all technique use (productive questions, conversational rapport, and relational rapport building tactics), which then predicted perceptions of rapport with the interviewer, and indirectly predicted cooperation and disclosure.

A fully recursive model was initially tested, followed by reductions to improve fit. The final model (see in Figure 4), provided good fit to the data ($\chi^2 / df = 0.68$; RMSEA $< .001$; TLI = 1.05; CFI = 1.00). As predicted, training directly increased the use of trained techniques ($b = .88$, $p < .001$, 95% CI [0.56, 1.19]), which positively predicted perceptions of rapport ($b = .17$, $p < .006$, 95% CI [0.05, 0.28]), which in turn predicted an increase in cooperation, ($b = .87$, $p < .001$, 95% CI [0.53, 1.21]), and, finally, positively predicted disclosure ($b = .29$, $p < .001$, 95% CI [0.13, 0.45]). Although the total indirect effect of training on information disclosure did not reach conventional levels of significance ($b = .28$, $p = .07$, 95% CI [-0.02, 0.57]), indirect effects on both cooperation ($b = .13$, $p = .03$, 95% CI [0.01, 0.24]) and perceptions of rapport ($b = .14$, $p = .02$, 95% CI [0.03, 0.26]) were significant. Consistent with prior research, the use of rapport tactics indirectly increased both cooperation ($b = .14$, $p = .02$, 95% CI [0.03, 0.26]) and information disclosure ($b = .31$, $p = .049$, 95% CI [0.001, 0.63]). Taken together, the model explained 17% of the variance in cooperation and 9% of the variance in information disclosure.

Discussion

The current study evaluated a training program focused on a rapport-based interviewing model with a sample of federal, state, and local law enforcement investigators in the U.S. Post-training, investigators reported that they felt well prepared to use the tactics and were highly likely to implement them in practice. While most training evaluations typically assess such self-reported learning effects, these evaluations often fail to predict learning or subsequent use of the

information (Carpenter et al., 2020; Uttl, 2017). Thus, we designed our study to examine changes in actual behavior as an assessment of learning. Using a repeated measures design in which investigators conducted interviews both prior to and immediately following training, we found rather robust training effects (*ds* of 0.53, 1.03, and 1.10) indicating that investigators clearly modified their practices to include evidence-based tactics. Training also led to a significant increase in perceptions of rapport by the interview subject.

Our study also replicated prior findings that perceptions of rapport can affect disclosure when mediated by a decision to cooperate with the interviewer (Brimbal et al., 2019). Modeling of the current data supported such indirect effects of rapport-based tactics leading to an increase in cooperation and information disclosure. These findings add to a growing body of research highlighting the mechanism by which rapport tactics appear to mitigate resistance (Kelly et al., 2016). Although the effects in our mediated model are statistically significant, they are smaller than the direct effects of training on use of tactics. Indeed, the multiplicative derivation of indirect effects, particularly those involving multiple mediations, will necessarily lead to small observed effects. Nevertheless, we hypothesized that the indirect effect of rapport building tactics would facilitate cooperation and aid interviewers in overcoming resistance. Our modeling confirmed this predication and accounted for 17% of the variance in cooperation. Rapport is likely not the only means by which interviewers could overcome resistance and increase information yield. For example, contextual factors that are independent of an interviewer's tactics can influence the reporting of information by interview subjects (Dawson et al., 2017; Dianiska et al., 2019). We encourage further research that examines the psychological mechanisms by which cooperation can lead to information disclosure in investigative interviews.

Interestingly, investigators in our sample reported being quite familiar with the rapport building tactics (more so than other tactics) prior to training. Our data suggest that they nevertheless showed increases in the frequency of using such tactics, and that these tactics were effective in developing perceptions of rapport. It is possible that our trainees' familiarity with rapport building tactics was due to their inclusion in other training programs. We note, however, that we emphasized throughout the training an important distinction between rapport-based tactics and minimization tactics that are frequently taught for accusatorial interviews. In this context, we discussed the findings of Horgan and colleagues (2012) that certain tactics classified as minimization were more likely to manipulate the perceived consequences associated with a confession (e.g., downplay consequences, face-saving excuses), whereas other tactics could more generally facilitate engagement and reduce the likelihood of false confessions (e.g., express sympathy, friendly demeanor, use of flattery). We also excluded from our training any tactics associated with forms of emotion provocation examined by Kelly and colleagues (2019) – including appeals to conscience, appeals to self-interest, or rationalizations. Thus, the tactics and ethos embodied in the current rapport-based interview training were aligned with a positive emotional approach, offering empathy and understanding. Overall, the shift in pre- and post-interviewer behaviors illustrated this move to a non-coercive, information gathering interview approach that improved perceived rapport and thereby facilitated cooperation and disclosure.

Strengths and Limitations of the Current Study

Overall, the results of the current training study support the potential utility and effectiveness of an evidence-based interview training program. Of note, the study assessed the effects of training with samples of experienced law enforcement officers from federal, state, and

local agencies who had prior experience and training in investigative interviewing, thus strengthening the generalizability of our findings.

Further, despite what might be initially seen as contrived paradigm for assessing the effects of training, the interview scenarios were built upon previous research (Oleszkiewicz et al., 2014) and included several personalized elements that make them a unique strength of this study. The scenarios that participants engaged in involved a cause that was important to them and included reference to a close friend of theirs. Investigators also received genuine details about the interview subjects, allowing us to better simulate efforts to build rapport with authentic information.

The controlled nature of the training assessment also allowed for several features that add to the literature. Compared to previous field research (e.g., Russano et al., 2019), the pre- and post-training interviews allowed us to more objectively assess learning and performance. The paradigm permitted us to measure what information our interview subjects knew and the key pieces of information they were able to provide, strengthening the internal validity of the study. We were also able to directly assess interview subjects' perceptions of rapport, and their decision to cooperate or resist during the interview. Such information can only be inferred by coders observing real interviews.

Although this study was designed to overcome the limitations of previous research, it is not without its own limitations. For the sake of feasibility and standardization, our interviews were limited to 20 minutes each, which may underestimate the average length of an investigative interview (Kassin et al., 2007). Interviewers also commented that they wanted more time in their post-training interviews to both build rapport and gather information. While this could limit the generalizability of our assessments, it is encouraging to note that despite feeling pressed for time

interviewers successfully increased their perceived rapport. Extending the interview assessment beyond 20 minutes may have allowed for significant gains in information yield as well.

Although we designed our scenario with external validity in mind, to maintain an element of control we opted to provide the details of the scenario to the participants. That they did not actually experience the planning of the terrorist plot certainly limits the generalizability of our findings. Nevertheless, we were able to demonstrate that interview subjects had successfully encoded the key details and could provide them within the scenario. Further, we used community members rather than individuals who were subjects of a genuine criminal investigation, potentially limiting the generalizability of our sample. Despite these limitations, we believe that the current paradigm captures important elements that law enforcement encounter when conducting investigative interviews (e.g., Dawson et al, 2015; Oleszkiewicz et al., 2014).

Finally, we note that our post-training interviews immediately followed the training and were in a similar format to our pre-training interviews. It is possible that over time investigators may not maintain the skills they demonstrated in this immediate assessment, as previous research has often observed a decline in training effects following extended periods (e.g., Griffiths & Milne, 2006; Powell et al., 2005). Further, despite our efforts to vary the details and cause in our scenarios, we cannot rule out confounds such as practice effects and the potential comfort of our investigators with the testing procedure. Limitations in funding and the logistics of engaging in follow-up evaluations precluded us from examining the observed training effects following a delayed period of time or including a no-training control group. We encourage future studies to prioritize such assessments.

Conclusion

The current study adds to the existing literature with respect to the training and effectiveness of empirically-based interviewing that seeks to develop rapport. While prior research has assessed specific interviewing tactics (e.g., Luke et al., 2014; Oleszkiewicz et al., 2017) and others have evaluated the UK's PEACE model (see Russano et al., 2019 for review), to our knowledge this is the first quasi-experimental training assessment of an evidence-based interview approach that combines elicitation tactics with elements of conversational rapport and relational rapport tactics within an information gathering approach. Our findings demonstrated that such a model of evidence-based interviewing could be successfully trained, and that the use of such tactics facilitated the development of rapport and indirectly increased interview subjects' cooperation and disclosure of information. Thus, rapport building tactics could serve as a foundational approach to effective investigative interviewing in the law enforcement context. Coupled with previous experimental and field research demonstrating the effectiveness of a rapport-based approach (Meissner et al., 2015; Meissner, Surmon-Böhr, et al., 2017), we hope this study will encourage a further shift in interviewing practice towards an evidence-based information gathering approach.

References

- Alison, L. J., Alison, E. A., Noone, G., Elntib, S., Waring, S., & Christiansen, P. (2014). The efficacy of rapport-based techniques for minimizing counter-interrogation tactics among a field sample of terrorists. *Psychology, Public Policy, and Law*, *20*, 421-430.
<http://dx.doi.org/10.1037/law0000021>
- Alison, L. J., Alison, E. A., Noone, G., Elntib, S., & Christiansen, P. (2013). Why tough tactics fail and rapport gets results: Observing Rapport-Based Interpersonal Techniques (ORBIT) to generate useful information from terrorists. *Psychology, Public Policy, and Law*, *19*, 411-431. <https://doi.org/10.1037/a0034564>
- Bayley, D. H. (1998). *Policing in America: Assessments and prospects. Ideas in American Policing*. Police Foundation.
- Brandon, S. E., Arthur, J. C., Ray, D. G., Meissner, C. A., Kleinman, S. M., Russano, M. B., & Wells, S. (2019). *The High-Value Detainee Interrogation Group (HIG)*. In M. A. Staal & S. C. Harvey (Eds.) *Operational Psychology: A New Field to Support National Security and Public Safety* (pp. 263-286). ABC-CLIO.
- Brimbal, L., Dianiska, R. E., Swanner, J. K., & Meissner, C. A. (2019). Enhancing cooperation and disclosure by manipulating affiliation and developing rapport in investigative interviews. *Psychology, Public Policy, and Law*, *25*, 107-115.
<https://doi.org/10.1037/law0000193>
- Brimbal, L., Kleinman, S. M., Oleszkiewicz, S., & Meissner, C. A. (2019). Developing rapport and trust in the interrogative context: An empirically-supported and ethical alternative to customary interrogation practices In S. J. Barela, M. J. Fallon, G. Gaggioli, & J. D. Ohlin

- (Eds.), *Interrogation and Torture: Integrating Efficacy with Law and Morality* (pp. 141-196). Oxford University Press.
- Carpenter, S. K., Witherby, A. E., & Tauber, S. K. (2020). On students' (mis)judgments of learning and teaching effectiveness. *Journal of Applied Research in Memory and Cognition*. Advance online publication. <https://doi.org/10.1016/j.jarmac.2019.12.009>
- Clarke, C., & Milne, R. (2001). *A national evaluation of the PEACE Investigative Interviewing Course*. London: Home Office.
- Clarke, C., Milne, B., & Bull, R. (2011). Interviewing suspects of crime: The impact of PEACE training, supervision and the presence of a legal advisor. *Journal of Investigative Psychology and Offender Profiling*, 8, 149-162. <https://doi.org/10.1002/jip.144>
- Costanzo, M. & Redlich, A. (2010). Use of physical and psychological force in criminal and military interrogations. In J. Knuttsson, & J. Kuhns (Eds.), *Policing around the world: Police use of force* (pp. 43-51). Praeger Security International.
- Davis, D., Soref, A., Villalobos, J. G., & Mikulincer, M. (2016). Priming states of mind can affect disclosure of threatening self-information: Effects of self-affirmation, mortality salience, and attachment orientations. *Law and Human Behavior*, 40, 351-361. <https://doi.org/10.1037/lhb0000184>
- Dawson, E., Hartwig, M., & Brimbal, L. (2015). Interviewing to elicit information: Using priming to promote disclosure. *Law and Human Behavior*, 39, 443-450. <https://doi.org/10.1037/lhb0000136>
- Dawson, E., Hartwig, M., Brimbal, L., & Denisenkov, P. (2017). A room with a view: Setting influences information disclosure in investigative interviews. *Law and Human Behavior*, 41, 333-343. <https://doi.org/10.1037/lhb0000244>

- Dianiska, R. E., Swanner, J. K., Brimbal, L., & Meissner, C. A. (2019). Conceptual priming and context reinstatement: A test of direct and indirect interview techniques. *Law and Human Behavior, 43*, 131–143. <https://doi.org/10.1037/lhb0000323>
- Dianiska, R. E., Swanner, J. K., Brimbal, L., & Meissner, C. A. (2020). *Using disclosure, common ground, and verification to build rapport, counter resistance, and elicit information*. Manuscript submitted for publication.
- Duke, M. C., Wood, J. M., Bollin, B., Scullin, M., & LaBianca, J. (2018). Development of the Rapport Scales for Investigative Interviews and Interrogations (RS3i), interviewee version. *Psychology, Public Policy, and Law, 24*, 64-79. <https://doi.org/10.1037/law0000147>
- Evans, J. R., Meissner, C. A., Ross, A. B., Houston, K. A., Russano, M. B., & Horgan, A. J. (2013). Obtaining guilty knowledge in human intelligence interrogations: Comparing accusatorial and information-gathering approaches with a novel experimental paradigm. *Journal of Applied Research in Memory and Cognition, 2*, 83-88. <https://doi.org/10.1016/j.jarmac.2013.03.002>
- Fahsing, I. A., & Rachlew, A. (2013). Investigative interviewing in the Nordic region. In T. Williamson, B. Milne, & S. Savage (Eds.), *International developments in investigative interviewing* (pp. 65-91). Routledge.
- Fisher, R. P., & Geiselman, R. E. (1992). *Memory-enhancing techniques for investigative interviewing: The Cognitive Interview*. Charles C. Thomas.
- Goodman-Delahunty, J., & Howes, L. M. (2016). Social persuasion to develop rapport in high-stakes interviews: Qualitative analyses of Asian-Pacific practices. *Policing and Society, 26*, 270-290. <https://doi.org/10.1080/10439463.2014.942848>

- Garrett, B. L. (2015). Interrogation policies. *University of Richmond Law Review*, *49*, 895-919.
- Goodman-Delahunty, J., Martschuk, N., & Dhimi, M. K. (2014). Interviewing high value detainees: Securing cooperation and disclosures. *Applied Cognitive Psychology*, *28*, 883–897. <https://doi.org/10.1002/acp.3087>
- Griffiths, L., & Milne, B. (2006). Will it all end in tiers?: Police interviews with suspects in Britain. In T. Williamson (Ed.), *Investigative interviewing: Rights, research, regulation* (pp. 167- 189). Willan Publishing.
- Griffiths, A., Milne, B., & Cherryman, J. (2011). A question of control? The formulation of suspect and witness interview question strategies by advanced interviewers. *International Journal of Police Science and Management*, *13*, 255-267. <https://doi.org/10.1350/ijps.2011.13.3.219>
- Hartwig, M., Meissner, C. A., & Semel, M. D. (2014). Human intelligence interviewing and interrogation: Assessing the challenges of developing an ethical, evidence-based approach. In R. Bull (Ed.), *Investigative interviewing* (pp. 209-228). Springer.
- Horgan, A. J., Russano, M. B., Meissner, C. A., Evans, J. R. (2012). Minimization and maximization techniques: assessing the perceived consequences of confessing and confession diagnosticity. *Psychology, Crime, & Law*, *18*, 65-78. <https://doi.org/10.1080/1068316X.2011.561801>
- Houston, K. A., Russano, M. B., & Ricks, E. P. (2017). ‘Any friend of yours is a friend of mine’: Investigating the utilization of an interpreter in an investigative interview. *Psychology, Crime & Law*, *23*, 413-426. <https://doi.org/10.1080/1068316X.2017.1290091>
- Kassin, S. M. (2012). Why confessions trump innocence. *American Psychologist*, *67*, 431–445.

- Kassin, S. M., Drizin, S. A., Grisso, T., Gudjonsson, G. H., Leo, R. A., & Redlich, A. D. (2010). Police-induced confessions: Risk factors and recommendations. *Law and Human Behavior, 34*, 3-38. <https://doi.org/10.1007/s10979-009-9188-6>
- Kassin, S. M., & Kiechel, K. L. (1996). The social psychology of false confessions: Compliance, internalization, and confabulation. *Psychological Science, 7*, 125-128. <https://doi.org/10.1111/j.1467-9280.1996.tb00344.x>
- Kassin, S. M., Leo, R. A., Meissner, C. A., Richman, K. D., Colwell, L. H., Leach, A.-M., & La Fon, D. (2007). Police interviewing and interrogation: a self-report survey of police practices and beliefs. *Law and Human Behavior, 31*, 381-400. <https://doi.org/10.1007/s10979-006-9073-5>
- Kelly, C. E., & Meissner, C. A. (2015). Interrogation and investigative interviewing of suspects in the United States. In D. Walsh, G. E. Oxburgh, A. D. Redlich, & T. Myklebust (Eds.), *International developments and practices in investigative interviewing and interrogation (Vol. II)*. Routledge.
- Kelly, C. E., Miller, J. C., & Redlich, A. D. (2016). The dynamic nature of *interrogation*. *Law and Human Behavior, 40*, 295-309. <https://doi.org/10.1037/lhb0000172>
- Kelly, C. E., Russano, M. B., Miller, J. C., & Redlich, A. D. (2019). On the road (to admission): Engaging suspects with minimization. *Psychology, Public Policy, and Law, 25*, 166-180. <https://doi.org/10.1037/law0000199>
- Kelly, C. E., & Valencia, E. J. (2020). You ask and do not receive, because you ask wrongly. *International Journal of Police Science & Management*. Advance online publication. <https://doi.org/10.1177/1461355720955077>

- Kleinman, S. M. (2006). KUBARK counterintelligence interrogation review: Observations of an interrogator—lessons learned and avenues for further research. In *Intelligence science board, educating information: Interrogation science and art* (pp. 95–140). National Defense Intelligence College.
- Koo, T. K., & Li, M. Y. (2016). A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of Chiropractic Medicine, 15*, 155-163. <https://doi.org/10.1016/j.jcm.2016.02.012>
- Leo, R. A. (2008). *Police Interrogation and American Justice*. Social Science Research Network.
- Luke, T. J., Hartwig, M., Joseph, E., Brimbal, L., Chan, G., Dawson, E., Jordan, S., Donovan, P., & Granhag, P. A. (2016). Training in the Strategic Use of Evidence technique: Improving deception detection accuracy of American law enforcement officers. *Journal of Police and Criminal Psychology, 31*, 270-278. <https://doi.org/10.1007/s11896-015-9187-0>
- Lum, C., Telep, C. W., Koper, C., & Grieco, J. (2012). Receptivity to research in policing. *Justice Research and Policy, 14*, 61-95. <https://doi.org/10.3818/JRP.14.1.2012.61>
- Matsumoto, D., & Hwang, H. C. (2018). Social influence in investigative interviews: The effects of reciprocity. *Applied Cognitive Psychology, 32*, 163-170. <https://doi.org/10.1002/acp.3390>
- McGurk, B., Carr, J., & McGurk, D. (1993). *Investigative interviewing courses for police officers: An evaluation*. Police Research Series Paper No. 4. London: Home Office.
- Meissner, C. A., Kelly, C. E., Woestehoff, S. A. (2015). Improving the Effectiveness of Suspect Interrogations. *Annual Review of Law and Social Science, 11*, 211-233. <https://doi.org/10.1146/annurev-lawsocsci-120814-121657>

- Meissner, C. A., Redlich, A. D., Michael, S. W., Evans, J. R., Camilletti, C. R., Bhatt, S., & Brandon, S. (2014). Accusatorial and information-gathering interrogation methods and their effects on true and false confessions: A meta-analytic review. *Journal of Experimental Criminology, 10*, 459-486. <https://doi.org/10.1007/s11292-014-9207-6>
- Meissner, C. A., Russano, M. B., & Atkinson, D. (2017, January). Science-based methods of interrogation: A training evaluation and field assessment. Paper presented at the Society for Applied Research in Memory & Cognition Conference, Sydney, Australia.
- Meissner, C. A., Surmon-Böhr, F., Oleszkiewicz, S., & Alison, L. J. (2017). Developing an evidence-based perspective on interrogation: A review of the US government's high-value detainee interrogation group research program. *Psychology, Public Policy, and Law, 23*, 438-457. <https://doi.org/10.1037/law0000136>
- Memon, A., Meissner, C. A., & Fraser, J. (2010). The Cognitive Interview: A meta-analytic review and study space analysis of the past 25 years. *Psychology, Public Policy, and Law, 16*, 340-372. <https://doi.org/10.1037/a0020518>
- Miller, W. R., & Rollnick, S. (2013). *Motivational interviewing: Helping people change (3rd ed.)*. Guilford Press.
- Oleszkiewicz, S., Granhag, P. A., & Cancino Montecinos, S. (2014). The Scharff-technique: Eliciting intelligence from human sources. *Law and Human Behavior, 38*, 478-489. <https://doi.org/10.1037/lhb0000085>
- Oleszkiewicz, S., Granhag, P. A., & Kleinman, S. M. (2017). Eliciting information from human sources: Training handlers in the Scharff technique. *Legal and Criminological Psychology, 22*, 400-419. <https://doi.org/10.1111/lcrp.12108>

Osbourne, J. W. & Costello, A. B. (2004). Sample size and subject to item ratio in principal components analysis. *Practical Assessment, Research, and Evaluation, 9*, 1-9.

<https://doi.org/10.7275/ktzq-jq66>

Powell, M. B., Fisher, R. P., & Wright, R. (2005). Investigative interviewing. In N. Brewer & K. D. Williams (Eds.), *Psychology and law: An empirical perspective* (pp. 11-42). The Guilford Press.

Russano, M. B., Kelly, C. E., & Meissner, C. A. (2019). From the ivory tower to the interrogation room: Training and field evaluation research on suspect interviewing. In R. Bull & I. Blandón-Gitlin (Eds.), *The Routledge International Handbook of Legal and Investigative Psychology* (pp. 287-310). Routledge.

Russano, M. B., Meissner, C. A., Atkinson, D. J. (2018, March). *Training science-based methods of interrogation to state and local law-enforcement officers: A training evaluation and field validation study*. Paper presented at the American Psychology-Law Society annual meeting, Memphis, TN.

Russano, M. B., Meissner, C. A., Narchet, F. M., & Kassin, S. M. (2005). Investigating true and false confessions within a novel experimental paradigm. *Psychological Science, 16*, 481-486. <https://doi.org/10.1111/j.0956-7976.2005.01560.x>

Russano, M. B., Narchet, F. M., Kleinman, S. M., & Meissner, C. A. (2014). Structured interviews of experienced HUMINT interrogators. *Applied Cognitive Psychology, 28*, 847-859. <https://doi.org/10.1002/acp.3069>

Snook, B., Fahmy, W., Fallon, L., Lively, C. J., Luther, K., Meissner, C. A., Barron, T., & House, J. C. (2020). Challenges of a “toolbox” approach to investigative interview: A critical

- analysis of the RCMP's Phased Interview Model. *Psychology, Public Policy, & Law*, 26, 261-273. <https://doi.org/10.1037/law0000245>
- Snook, B., Luther, K., Quinlan, H., & Milne, R. (2012). Let'em talk! A field study of police questioning practices of suspects and accused persons. *Criminal Justice and Behavior*, 39, 1328-1339. <https://doi.org/10.1177/0093854812449216>
- Tickle-Degnen, L., & Rosenthal, R. (1990). The nature of rapport and its nonverbal correlates. *Psychological Inquiry*, 1, 285-293. http://dx.doi.org/10.1207/s15327965pli0104_1
- Uttl, B., White, C. A., & Gonzalez, D. W. (2017). Meta-analysis of faculty's teaching effectiveness: Student evaluation of teaching ratings and student learning are not related. *Studies in Educational Evaluation*, 54, 22-42. <http://dx.doi.org/10.1016/j.stueduc.2016.08.007>
- Vallano, J. P., Evans, J. R., Schreiber Compo, N., & Kieckhafer, J. M. (2015). Rapport-building during witness and suspect interviews: A survey of law enforcement. *Applied Cognitive Psychology*, 29, 369-380. <https://doi.org/10.1002/acp.3115>
- Vallano, J. P., & Schreiber Compo, N. (2015). Rapport-building with cooperative witnesses and criminal suspects: A theoretical and empirical review. *Psychology, Public Policy, and Law*, 21, 85-99. <http://dx.doi.org/10.1037/law0000035>
- Wachi, T., Kuraishi, H., Watanabe, K., Otsuka, Y., Yokota, K., & Lamb, M. E. (2018). Effects of rapport building on confessions in an experimental paradigm. *Psychology, Public Policy, and Law*, 24, 36-47. <https://doi.org/10.1037/law0000152>
- Walsh, D., & Bull, R. (2010). What really is effective in interviews with suspects? A study comparing interviewing skills against interviewing outcomes. *Legal and Criminological Psychology*, 15, 305-321. <https://doi.org/10.1348/135532509X463356>

Walsh, D. W., & Milne, R. (2008). Keeping the PEACE? A study of investigative interviewing practices in the public sector. *Legal and Criminological Psychology, 13*, 39-57.

<https://doi.org/10.1348/135532509X463356>

Weisburd, D. & Neyroud, P. (2011). *Police science: Toward a new paradigm* (New Perspectives in Policing). Executive Session on Policing and Public Safety.

Westera, N. J., Zajac, R., & Brown, D. A. (2016). Witness interviewing practices in New Zealand. In D. Walsh, G. E. Oxburgh, A. D. Redlich, & T. Myklebust (Eds.) *International developments and practices in investigative interviewing and interrogation* (pp. 87–98). Routledge.