AMERICAN PSYCHOLOGICAL ASSOCIATION
American Psychology-Law Society

Law and Human Behavior

ISSN: 0147-7307

2021, Vol. 45, No. 1, 55–67
https://doi.org/10.1037/lhb0000437

Evaluating the Benefits of a Rapport-Based Approach to Investigative Interviews: A Training Study With Law Enforcement Investigators

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Objective: 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 interviewee'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 before and after this training, investigators interviewed semi cooperative subjects ($N = 125$). Interviews were coded for the use of various interview tactics, as well as subjects' 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 posttraining 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 individuals' resistance to cooperate, and increase information yield.

Public Significance Statement
Practitioners often criticize a rapport-based approach for its lack of efficacy with resistant subjects. This study finds that after a 2-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.

Kyle C. Scherr served as Action Editor.

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This work was funded by the High-Value Detainee Interrogation Group (Contract DJF-15-1200-V-0010408). Any opinions, findings, and conclusions or recommendations expressed in this article are those of the authors and do not reflect the views of the U.S. government. Results from this study were presented at the American Psychology-Law Society annual meeting in March 2019. Special thanks to Krysta Mroz, Teresa Paton, Darian Healy, and Latevia Williams for their help in coding data. Supplemental materials and data are available on the Open Science Framework (https://osf.io/w9ysg/).

The data are available at https://osf.io/w9ysg/.

The experiment materials are available at https://osf.io/w9ysg/.

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Keywords: interrogation, investigative interview training, investigative interview rapport, evidence-based interviewing

Supplemental materials: https://doi.org/10.1037/lhb0000437.supp

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, for more than 50 years interviewing techniques have been based on customary knowledge developed through practitioner experience and informed by anecdotal evidence (Hartwig 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) that safeguards 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 et al., 2017). In the current article, 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 interviewees, 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 an individual is suspected of guilt, interviewers interviews attempt to secure a confession by exerting control, manipulating an individual's perception of the evidence against them, and suggesting the potential benefits of providing a confession (Kassin, 2012). It is often difficult for an individual 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 an interviewee'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 an individual (rather than a confession; for review, see Meissner et al., 2015; Meissner et al., 2017). A number of countries now utilize this approach to interview both cooperative and uncooperative subjects (e.g., the United Kingdom: Walsh & Milne, 2008; Norway: Fahsing & Rachlew, 2013; New Zealand: Westera et al., 2016). 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, Dianiska, 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 an individual (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 for review, see resistant subjects 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 definition that characterizes the relationship between the interviewer and subject with a generally positive exchange (Tickle-Degnen & Rosenthal, 1990); attentiveness toward 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 two sides of the same coin, Kelly et al., 2016). We detail each of these sets of tactics in the following text.

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 an individual's memory (Fisher & Geiselman, 1992) and prevent the individual 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 an individual's constructive statements, attributes, or experiences (e.g., "I appreciate your honesty") and encourage similar contributions. Reflections (e.g., repeating back to the individual certain words or phrases and/or sharing observations relating to the individual's emotion state) and summaries (i.e., offering back a concise, yet detailed, encapsulation of what the individual has said) demonstrate that the interviewer has listened to the individual 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 individual (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 an individual 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 an individual's responses—can facilitate perceived autonomy and encourage a free-flowing interview context. Evocation involves drawing-out an individual's emotions and motivations during the interview, paving the way for acceptance and demonstrations of empathy. Indeed, if the interviewer successfully evokes what an individual is feeling in the moment or why they are demonstrating resistance, they can offer acceptance and empathetic prompts that demonstrate a nonjudgmental 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 individual (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 an individual's self-esteem by underlining positive aspects of their identity) or verifications (displays of an accurate understanding of the individual'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.

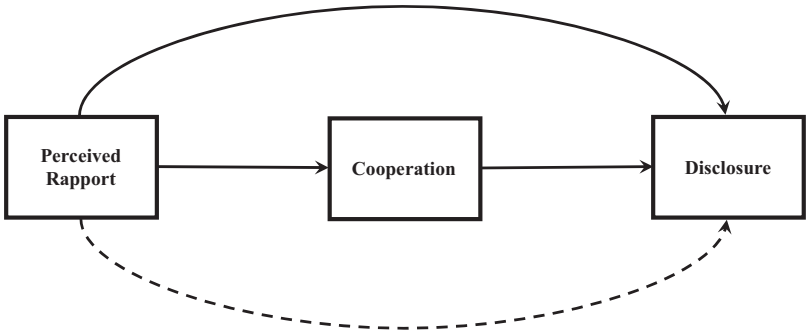
Modeling Rapport, Cooperation, and Disclosure

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 they will cooperate with an interviewer (cf. Brimbal, Dianiska, 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 an individual (Dianiska et al., 2020; 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 individual decides to cooperate. This mediational model has found support in several laboratory (e.g., Brimbal, 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 United Kingdom in the early 1990s, has been evaluated on several occasions demonstrating mixed results. McGurk et al. (1993) found that PEACE trained officers' skills in actual interviews improved posttraining 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

Figure 1
The Indirect Effect of Rapport on Disclosure Through Cooperation



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 interviewee'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 United Kingdom, 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 interviewee'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 United States (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 individuals' 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.

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 years (M = 40.80, SD = 8.35), and were 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) having conducted fewer than 100, and 9.09% (n = 1) having conducted more 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 = *not at all*; 7 = *very*) from pilot participants indicated that they believed the techniques were useful in developing cooperation and eliciting information from interviewees (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 [.32, 2.28], and conversational rapport

tactics, $t(10) = 2.82$, $p < .05$, $d = .85$, 95% CI [.06, 1.95], but not their use of relational rapport-building tactics, $t(10) = 1.02$, $p = .33$, $d = .31$, 95% CI [–.31, .91]. Based on 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 subjects 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 and practical limits associated with the size of the training facilities and the collection of pre- and posttraining 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 posttraining interviews at each location.

Law Enforcement Investigators

We recruited three cohorts of investigators (Sample 1: $n = 31$; Sample 2: $n = 16$; Sample 3: $n = 20$) from several state and local law enforcement agencies (46.27% of the total sample) and one federal law enforcement agency in the United States. This resulted in a total sample of 67 investigators, 58 of whom completed both the pre- and posttraining interviews (two interviewers completed only the posttraining interview, and seven interviewers completed only the pretraining interview). All investigators provided their oral consent to participate. The final sample was 81.40% male, ranging in age from 26 to 58 years ($M = 39.79$, $SD = 7.12$), 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 one 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.

Procedure

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 (the third and fourth author) 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 [i.e., 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 individual's autonomy). 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 posttraining interviews, investigators ($N = 60$) responded to an assessment of the course that included 7-point Likert scales evaluating their pretraining familiarity with the information-gathering tactics, the likelihood that they might use these tactics in the future, and the extent to which they felt prepared to use the tactics.

Pre- and Posttraining 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 (assassination or bombing, counterbalanced) for their pretraining interview, and they received the alternative scenario for their posttraining interview. We gave investigators between 10 min and 20 min 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-min interview. We imposed a 20-min time limit to standardize across interviewers and due to logistical and time constraints (a limited number of interview rooms were available; pre- and posttraining interviews were conducted within a 2- to 3-hr window). A researcher notified investigators when 5 min 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.

Interviewees. 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) 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 individuals/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 prochoice movement) and identified the belief/cause about which they felt most strongly. We then asked them to think about a close friend who shared the same belief that 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 with whom they were close. 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 individuals 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 the Open Science Framework (OSF).

Dependent Measures

Perceptions of Rapport With the Interviewer

A principal components analysis demonstrated that all items from the postinterview 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; Osborne & Costello, 2004) were included in a final composite measure (α = .89; all items, regardless of inclusion, are included 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 toward me") and trust (e.g., "The interviewer was capable"; "Most people that the interviewer interacts with would view his or 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 ranging from 1 = *completely unwilling*; 7 *completely willing*) indicating a more cooperative disposition toward 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 ranging 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 in a nonjudgmental 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., the interviewer did not make explicit that if he or she did something for the subject, then they 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, 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 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 the online supplemental material). 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 posttraining 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 ranging 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 = .62) and preparedness to use the techniques (M = 5.89, SD = .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%), even though 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 reluctant to provide information (M = 12.26, SD = 6.22, from a total of 35 potential details). Furthermore, interviewees were above the midpoint (on scales from 1 to 7) when reporting their motivation to balance

Table 1

Descriptive Statistics for Investigators' Perceptions of the Training (for the 60 Interviewers Who Completed the Posttraining Assessment)

	Familiarity before training (1 = *completely unfamiliar*, 7 = *very familiar*)		Likelihood of use (1 = *completely unlikely*, 7 = *very likely*)		Preparedness (1 = *completely unprepared*, 7 = *very prepared*)	
Training topic	*M*	*SD*	*M*	*SD*	*M*	*SD*
Productive questions	3.19	1.99	5.74	0.94	5.74	0.94
Active listening	4.31	2.00	6.14	0.86	6.14	0.86
Resistance management	3.80	1.82	5.74	1.00	5.74	1.00
Trust building tactics	4.84	1.67	5.99	0.91	5.99	0.91
Rapport-building tactics	5.39	1.61	6.23	0.73	6.23	0.73

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 to evaluate the effects of training (pretraining vs. posttraining), 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 interviewees, $\chi^2(1, N = 67) = 3.87$, $p = .049$, $d = .49$, 95% CI [.001, .99]. In contrast, the direct effect of training was nonsignificant for measures of cooperation, $\chi^2(1, N = 67) = .25$, $p = .62$, $d = .12$, 95% CI [–.36, .60], and information disclosure, $\chi^2(1, N = 67) = 1.87$, $p = .17$, $d = .20$, 95% CI [–.16, .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 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% CI [.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% CI [.49, 1.56], such that the use of these tactics increased posttraining. Finally, investigators also demonstrated a significant effect of training on relational rapport tactics, $\chi^2(1, N = 67) = 4.32$, $p = .038$, $d = .53$, 95% CI [.03, 1.02], with an increased use of relational rapport-building tactics posttraining.

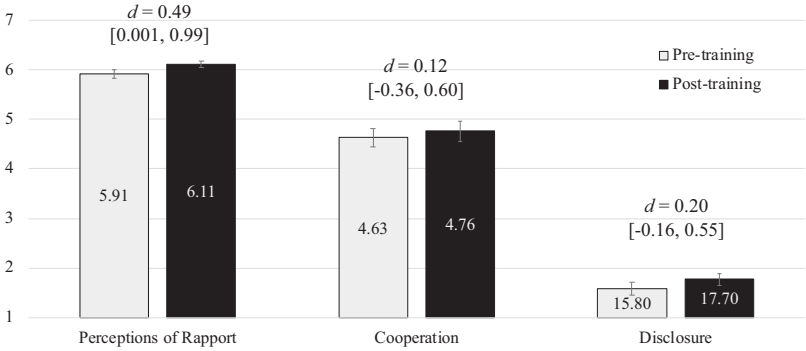
Direct and Indirect Effects of Training on Rapport, Cooperation, and Disclosure

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 Brimbal, Dianiska, et al., 2019; Dianiska et al., 2020). 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 8 (Muthén & Muthén, 2017). 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 Figure 4) provided good fit to the data ($\chi^2/df = .68$; RMSEA < .001; TLI = 1.05; CFI = 1.00). As predicted, training directly increased the use of trained techniques ($b = .88$, $p < .001$, 95% CI [.56, 1.19]), which positively predicted perceptions of rapport ($b = .17$, $p < .006$, 95% CI [.05, .28]), which in turn predicted an increase in cooperation ($b = .87$, $p < .001$, 95% CI [.53, 1.21]), and, finally, positively predicted disclosure ($b = .29$, $p < .001$, 95% CI [.13, .45]). Although the total indirect effect of training on information disclosure did not reach conventional levels of significance ($b = .28$, $p = .07$, 95% CI [-.02, .57]), indirect effects on both cooperation ($b = .13$, $p = .03$, 95% CI [.01, .24]) and perceptions of rapport ($b = .14$, $p = .02$, 95% CI [.03, .26]) were significant. Consistent with prior research, the use of rapport tactics indirectly increased both cooperation ($b = .14$, $p = .02$, 95% CI [.03, .26]) and information

Figure 2

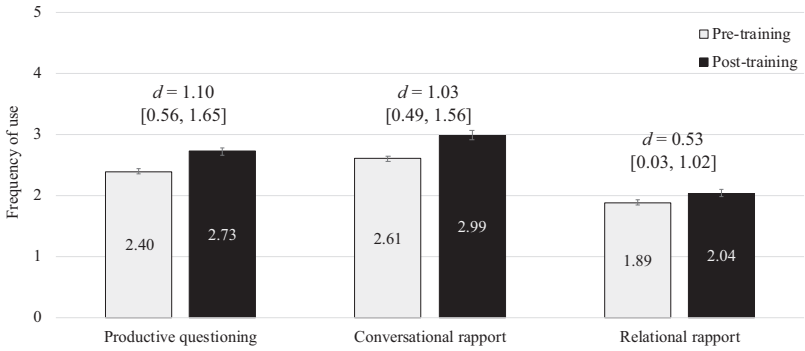
Means and Standard Errors for Perceptions of Rapport, Cooperation With the Interviewer, and Information Disclosure Pre- and Posttraining



Note. An increase in this graph indicates an increase in perceived rapport, cooperation, and disclosure. Disclosure was measured on a scale from 0 to 70, but means were divided by 10 for scaled viewing.

Figure 3

Means and Standard Errors for Use of Tactics (Productive Questions, Conversational Rapport, and Relational Rapport) Pre- and Posttraining



disclosure (b = .31, p = .049, 95% CI [.001, .63]). Taken together, the model explained 17% of the variance in cooperation and 9% of the variance in information disclosure.

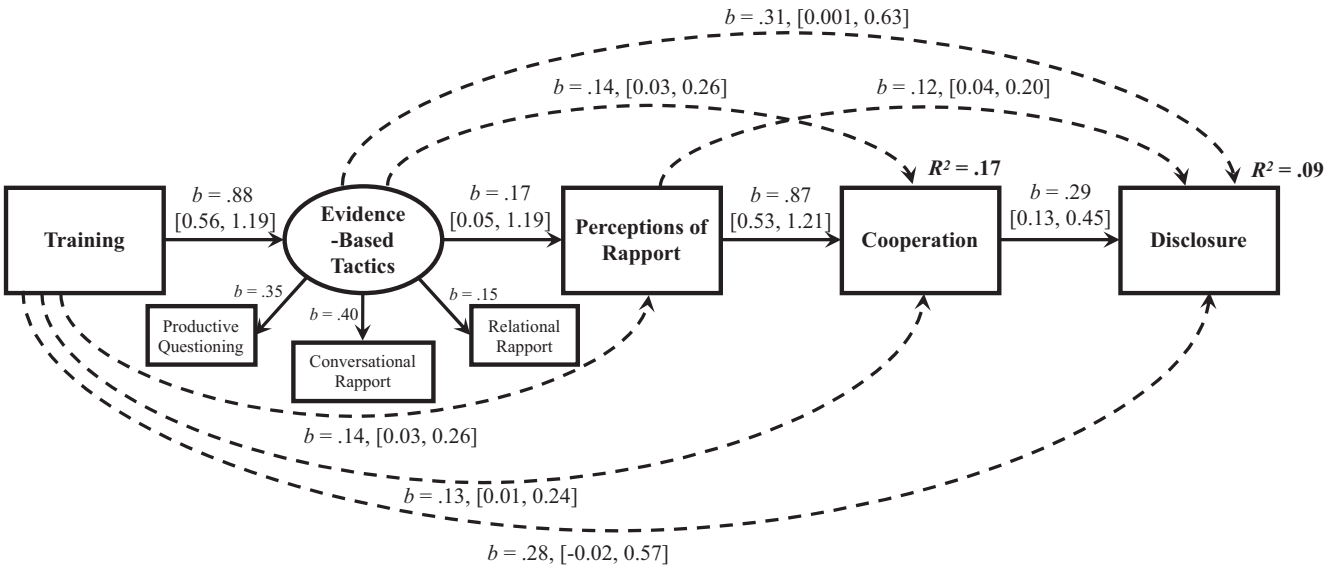
Discussion

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 United States. Post-training, investigators reported that they felt well prepared to use the tactics and were highly likely to implement them in practice. Although 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 et al., 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 .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, Dianiska, 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

Figure 4

Direct and Indirect Effects of Training and Use of Evidence-Based Interview Tactics on Perceptions of Rapport, Cooperation, and Information Disclosure



Note. Solid lines represent direct effects. Dashed lines represent indirect effects.

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 prediction 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., 2020). 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 et al. (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 et al. (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 between pretraining and posttraining interviewer behaviors illustrated this move to a noncoercive, information-gathering interview approach that improved perceived rapport and thereby facilitated cooperation and disclosure.

Strengths and Limitations

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 a 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 posttraining interviews allowed us to more objectively assess learning and performance. The paradigm permitted us to measure what information our interviewees 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 min 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 posttraining 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 min 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 posttraining interviews immediately followed the training and were in a similar format to our pretraining 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 time delay 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. Although prior research has assessed specific interviewing tactics (e.g., Luke et al., 2016; Oleszkiewicz

et al., 2017) and others have evaluated the U.K.'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 et al., 2017), we hope this study will encourage a further shift in interviewing practice toward an evidence-based information-gathering approach.

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Received October 8, 2020
Revision received December 9, 2020
Accepted December 17, 2020 ■