**Humane Interrogation Strategies are Associated with Confessions, Cooperation, and Disclosure: Evidence from a Field Study of Incarcerated Individuals in the U.S.**

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**Biosketches**

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**Abstract**

The techniques used to interrogate individuals suspected of a crime can profoundly impact their decisions to confess, cooperate, or disclose information. Research using different methods suggests that two prevailing interrogation approaches—accusatorial and information-gathering—differentially impact interrogation outcomes. However, confession, cooperation, and information disclosure are ultimately the suspected person’s decision, yet few studies directly examine their perspectives about how interrogation techniques affect their decisions, and none examine a U.S. sample. The present study assessed how interrogation strategies characterized by humanity, rapport, confrontation, and dominance/control predicted interrogation outcomes in a sample of 249 individuals incarcerated in two U.S. jails. Respondents who reported experiencing humane strategies were more likely to confess, cooperate completely, and disclose incriminating information. Dominance/control-oriented strategies predicted partial confession (but not cooperation or disclosure), and rapport-based and confrontational techniques did not predict outcomes. Findings highlight humane interrogation strategies as likely the most productive strategies to adopt in criminal interrogations.

*Keywords:* interrogation, confession, cooperation, disclosure, suspect

**Humane Interrogation Strategies are Associated with Confessions, Cooperation, and Disclosure: Evidence from a Field Study of Incarcerated Individuals in the U.S.**

Research on the methods used in criminal interrogations has flourished in the past few decades, primarily in response to growing awareness of false confessions that can lead to wrongful convictions (Kassin et al., 2010). In many countries including the U.S., confession evidence carries immense weight; its presence virtually guarantees conviction at trial (Appleby et al., 2013) or by guilty plea (Redlich et al., 2018), even if the confession was the product of a coercive interrogation (Shaked-Schroer et al., 2015) or contradicted by exculpatory evidence (Appleby & Kassin, 2016). Consequently, scholars have devoted considerable attention to identifying and classifying interrogation techniques and their impact on confession rates.

Interrogation techniques are typically classified into broad dichotomies based on their intended outcome (e.g., minimization versus maximization; dominance versus humanity, Kelly et al., 2013), with a particular emphasis on accusatorial versus information-gathering approaches. Accusatorial approaches—still dominant in many parts of the U.S.—are guilt-presumptive, confrontational techniques aimed at obtaining confessions (i.e., admissions of guilt to police during interrogation; suspected persons may confess to all or some aspects of a crime, e.g., Redlich et al., 2018). In contrast, information-gathering approaches, initially developed in the U.K. and used in a variety of countries, prioritize building rapport and utilizing humane, ethical techniques to enhance cooperation (i.e., willingness to engage with interviewers and aid in investigations) and information disclosure (i.e., the timely disclosure of crime-relevant and truthful information to police; see, generally, Bull & Rachlew, 2020). Compared to accusatorial approaches, information-gathering approaches tend to produce more diagnostic confession outcomes (Catlin et al., 2023) and result in more cooperation and disclosure of crime-relevant information from guilty people (e.g., Evans et al., 2013), leading both scholars and practitioners to advocate for a shift away from accusatorial interrogations. Indeed, an international committee of experts drafted and recently published the ‘universal protocol’ (i.e., worldwide guidance) advocating for non-coercive interviewing methods (Mendez, 2021).

 Research on the classification of interrogations in the U.S. and their impacts on interrogation outcomes has been limited in two ways. First, it is predominantly based on officers’ self-reported use of techniques (e.g., Cleary & Warner, 2016). The limited number of studies from the perspective of the target of the interrogation—that is, the individual suspected of a crime—were pioneered two decades ago by Holmberg and Christianson (see Bull & Rachlew, 2020). Understanding a suspected person’s point of view is vital since they ultimately decide whether to confess, cooperate, or disclose information. Previous research has shown that suspected persons’ experiences and perceptions do influence their (self-reported) interrogation-related decisions (e.g., Goodman-Delahunty et al., 2014; Holmberg & Christianson, 2002; Kebbell et al., 2008, 2010). However, these studies have been almost exclusive to samples outside of the U.S. (but see Cleary & Bull, 2019, 2021), where interrogation methods may differ from those used within the U.S. (Miller et al., 2018).

Second, existing work is limited in that most studies focus on confessions as the sole outcome of interest (e.g., Cleary & Bull, 2021). While obtaining confessions is the primary goal of accusatorial interrogations (e.g., Inbau et al., 2013), some police in the U.S. have begun to use a range of techniques from both accusatorial and information-gathering approaches (Cleary & Warner, 2016). This suggests a gradual shift toward more information-gathering techniques, where cooperation and disclosure from persons suspected of a crime are prioritized over confessions (Meissner et al., 2017). There is growing recognition that cooperation and voluntary disclosure from persons suspected of a crime are central to successful interviews, and researchers can support the shift toward evidence-based investigative interviewing by measuring cooperation and disclosure as key outcome variables.

The present study adds to this growing body of research by exploring how a variety of techniques from accusatorial and information-gathering approaches predict suspected persons’ self-reported confession, cooperation, and disclosure decisions. The study extends prior work by Cleary and Bull (2019; 2021) in several ways. Their initial article focused on a sample of 444 individuals detained in one of two jail facilities and examined perceptions of (un)favorable interrogation techniques. In their subsequent article, Cleary and Bull (2021) narrowed to a subset of detained individuals (*N* = 249) who had been interrogated about the crime(s) they were charged with; that article examined how detained individuals’ personal characteristics, criminological factors, and interrogation-related characteristics were associated with the confession outcomes of these interrogations.

Using data from the same sample of detained individuals, the present study further examines how the specific interrogation techniques police used related not only to respondents’ confession outcomes but also their levels of cooperation and disclosure during the interrogation. In doing so, this study contributes an essential piece to the growing body of literature on suspected persons’ experiences with interrogations: examining the role of accusatorial and information-gathering methods in various interrogation outcomes in a sample of detained persons in the U.S.

**Accusatorial, Confrontational Methods**

 Accusatorial interrogation techniques are characterized by direct, often aggressive confrontation in which the interrogator expresses their certainty in the guilt of the person suspected of a crime. The Reid Technique has been regarded by a variety of scholars as an exemplar of accusatorial interrogation methods and is a widely adopted training paradigm in the U.S. (Cleary & Warner, 2016). The Reid Technique has consisted of two phases, with the first phase (the Behavior Analysis Interview; BAI) intended to detect a deceptive interviewee by use of non-confrontational questions (Inbau et al., 2013). Only those determined to be lying—and therefore probably guilty—move forward to an interrogation. Reid’s interrogation consists of steps intended to induce individuals who are guilty to confess, including direct confrontation, offering justifications, and preventing denials.

 A wealth of research has failed to find support for the Reid Technique specifically and accusatorial approaches generally. Research suggests that the BAI may not accurately distinguish between guilty and innocent interviewees, largely because its indicators are based on faulty cues to deception (Vrij et al., 2019). Thus, both individuals who are guilty and those who are innocent might move into guilt-presumptive interrogation. Indeed, a prevailing concern with accusatorial techniques is that they work *too* well—that is, they can create conditions of fear, stress, and hopelessness that lead not only guilty individuals to confess, but also some innocent individuals to confess as a means of escape. Specifically, innocent individuals may come to prioritize the short-term benefits of confessing (i.e., to end the interrogation) over its long-term consequences—a tendency that accusatorial tactics capitalize on (Kassin et al., 2010).

**Rapport-based, Information-Gathering Methods**

In contrast to accusatorial interrogations, rapport-based and information-gathering approaches focus on building and maintaining rapport and trust with an interviewee. Their goal is to elicit new information of evidentiary value instead of confessions (see Bull & Rachlew, 2020). The PEACE model (Preparation and Planning, Engage and Explain, Account, Closure, and Evaluate) is a widely used humanitarian approach to investigative interviewing. The model was developed initially in the UK as a means to move away from accusatorial approaches (Milne & Bull, 1999), and has since been adopted in many other countries (Miller et al., 2018). PEACE trains officers to be open-minded, respectful, fair, and honest to interviewees and use techniques like rapport, open-ended questions, and free recall (Bull & Milne, 2004).

Both field and experimental research generally demonstrate the effectiveness of information-gathering and humane approaches (Bull & Rachlew, 2020). For instance, analyses of recorded interviews found that techniques compatible with PEACE were related to more comprehensive disclosure and confessions from persons suspected of a crime (Walsh & Bull, 2010). In a meta-analysis of available laboratory-based experiments, Meissner et al. (2014) demonstrated that information-gathering approaches increased the diagnosticity of confessions compared to accusatorial approaches. Beyond confessions, these approaches also impact cooperation and disclosure from persons suspected of a crime. Evans et al. (2013) found that information-gathering approaches resulted in more reliable and critical information disclosure, while accusatorial approaches decreased information gain.

A crucial element of humane approaches is the building and maintaining of rapport. Though operational definitions vary across studies, rapport in criminal interviews generally refers to the “temporary working relationship created strategically by the interviewer to increase the likelihood that the suspect will disclose crime-relevant information” (Crough et al., 2022, p. 225). Rapport is built and maintained through strategies like finding common ground with the interviewee, showing respect, or meeting the interviewee’s basic needs (Kelly et al., 2013). Strong rapport between an officer and person suspected of a crime is associated with more satisfactory outcomes (Walsh & Bull, 2012), as interviewees who perceive greater rapport are more likely to cooperate and, in turn, disclose information (Brimbal et al., 2021; Goodman-Delahunty et al., 2014). Importantly, rapport-building is a component of both accusatorial and information-gathering methods; however, rapport in an accusatorial context is used as a tactic of emotional manipulation to elicit a confession. Thus, rapport as an interviewing technique appears most effective when used within a humane framework (see Vallano & Schreiber Compo, 2015).

**Interviewee-Focused Research**

Studies examining perceptions of interrogations from the perspective of persons suspected of a crime have provided further support for information-gathering approaches (Goodman-Delahunty et al., 2014; Holmberg & Christianson, 2002; Kebbell et al., 2008, 2010; Snook et al., 2015; Wachi et al., 2016a). Holmberg and Christianson (2002) surveyed convicted persons in Swedish prisons to investigate their perceptions of interrogation styles used by their interrogating officers. They identified two main approaches: humane and dominant. Humane techniques encompassed officers’ use of empathy, respect, and friendliness. Dominant techniques were associated with attitudes like aggressiveness, hostility, and persistency—techniques typical of accusatorial approaches (see also Häkkänen et al., 2009). Convicted persons who perceived their interrogators as more humane were nearly four times more likely to report having admitted guilt, while those who perceived their interrogation as high in dominant techniques were more likely to deny guilt.

Subsequent work provides continued support for both the importance of the interviewee’s perspective and the differential impact of information-gathering (humane) and accusatorial (dominant) techniques. Among a sample of persons convicted of a crime in Australia, those who perceived their interrogating officer as more humane, more ethical, and less dominant were more likely to have confessed (Kebbell et al., 2010), as persons convicted of a crime view humane interrogation methods as fairer (Kebbell et al., 2008). Wachi et al. (2016a) surveyed persons incarcerated in Japan and found that among those who (a) had not decided whether they would confess or (b) had decided they would deny prior to the interrogation, ‘relationship-focused’ methods (i.e., active listening and rapport) led to more confessions than ‘undifferentiated-high’ methods, where interrogators used both relationship-focused and confrontational methods (see also May et al., 2021).

Apart from increasing the likelihood of confessions, two other interviewee-focused studies have demonstrated that humane approaches are also associated with self-reported cooperation and disclosure (Goodman-Delahunty et al., 2014; Snook et al., 2015). With a sample of males who were interrogated and subsequently incarcerated in Canada, Snook et al. (2015) found humanitarian-style approaches not only lead to increased confessions but also self-reported levels of cooperation. Goodman-Delahunty et al. (2014) interviewed a multinational sample of high-value detained individuals about their most recent interrogation and similarly found disclosure of meaningful information was over four times more likely when interrogated with rapport-building techniques.

**The Present Study and Hypotheses**

Interviewee-focused research suggests that the perceived use of humanitarian and information-gathering techniques can increase confessions, cooperation, and disclosure. However, comparative research in the U.S. is lacking. Here we build upon prior work by exploring whether different interrogation methods predict self-reported confession, cooperation, and disclosure among a sample of individuals detained in U.S. jails. We hypothesized that detained individuals would report experiencing both accusatorial (dominance, confrontational) and information-gathering (humanity, rapport-building) types of interrogation tactics (Hypothesis 1). Further, based on the research reviewed above, we hypothesized that experiencing information-gathering tactics would predict higher likelihoods of confession, cooperation, and information disclosure compared to accusatorial tactics (Hypothesis 2).

**Method**

**Participants**

In total, 444 individuals incarcerated in two jails in Virginia participated. Of those, 249 reported being questioned by police about the crime that they were being charged with, which comprised the analytic sample for the present study (see Cleary & Bull, 2019 for a description of the 444 respondents). The sample was majority male (85.5%), Black (48.6%), and 34.8 years old, on average (*SD* = 11.0; range: 18–69). Respondents were currently incarcerated for weapon or drug charges (29.9%), property crimes (19.4%), probation violations or administrative offenses (16.3%), crimes against persons (15.1%), driving or traffic offenses (7.2%), and crimes involving fraud or indecency (3.3%). Two-thirds had been convicted (68.8%; the remaining were awaiting trial). See Cleary and Bull (2021) for a full description of the analytic sample.

**Measures**

A two-part questionnaire was developed for this study, which was informed by prior studies with persons suspected of a crime (Kebbell et al., 2010; Wachi et al., 2016b). The questionnaire was pilot tested with a small sample (*N* = 21)of detained and non-detained adults for readability and clarity. The final distributed questionnaire was readable at a seventh-grade level. In the first section of the questionnaire, respondents provided their opinions about 26 different interrogation tactics, indicating which tactics they believed police should use when interrogating persons suspected of a crime. Analyses of these items are presented in Cleary and Bull (2019).

The questionnaire then asked respondents if police had custodially interrogated them for the incident they were being charged with at the time of completing the study.1 Those who indicated yes (*N* = 249) were invited to complete the second section of the questionnaire, which contained a series of questions about their interrogation experience. Items included sociodemographic factors, criminological factors, contextual factors, interrogation outcomes (confession, cooperation, and disclosure), and techniques respondents believed officers used when they were being interrogated. The present study examines the association of those interrogation techniques with the outcomes of (a) confession, (b) cooperation with police, and (c) information disclosure.

***Predictor Variables: Interrogation Techniques Experienced***

 Twenty-five statements representing a range of interrogation techniques were presented to respondents. These included techniques such as minimization, maximization, confrontation, respect, and rapport (see Table 1 for the actual wording) and were based on prior research with samples of persons suspected of criminal involvement (Holmberg & Christianson, 2002; Kebbell et al., 2010; Snook et al., 2015; Wachi et al., 2016a) and Kelly and colleagues’ (2013) taxonomy of interrogation methods. Respondents indicated the degree to which they perceived the police officer used each technique during their interrogation on a 1 (strongly disagree) to 5 (strongly agree) Likert scale.

***Outcome Variables: Interrogation Outcomes***

 **Confession.** Prior research often uses a dichotomous measurement of confession outcome (i.e., denied or confessed; Deslauriers-Varin et al., 2011), however, this does not always capture the reality of interrogation outcomes, as individuals may confess to only portions of the crime in question (e.g., Redlich et al., 2018). Thus, we used a trichotomous measurement of confession outcome (see also Wachi et al., 2014). Respondents were asked: “Overall, did you confess to any of the crimes the police accused you of?” and indicated whether they had denied everything (*n* = 126; 50.6%); confessed to parts, but not everything (*n* = 58, 23.3%); or confessed to everything (*n* = 53, 21.3%).

**Cooperation.** We measured cooperation via the item: “Overall, how much did you cooperate with the police during the interrogation?” Response options included ‘didn’t cooperate at all’ (0; *n* = 69, 27.7%), ‘cooperated a little’ (1; *n* = 37, 14.9%), ‘cooperated a lot’ (2; *n* = 27, 10.8%), and ‘cooperated completely’ (3; *n* =109, 43.8%).

**Disclosure.** Disclosure is a related, but conceptually distinct, construct capturing the degree to which interviewees provide incriminating information to police. We measured disclosure of information using the item: “Overall, how much information did you provide that would make you look guilty?” Response options included ‘no information’ (0; *n* = 136, 54.6%), ‘a little information’ (1; *n* = 46, 18.5%), ‘a lot of information’ (2; *n* = 21, 8.4%), and ‘everything’ (3; *n* = 40, 16.1%). We did not provide a priori definitions of confession, cooperation, or disclosure beyond the questionnaire item (for a similar approach, see Snook et al., 2015).

***Additional Predictor Variables***

 Consistent with prior work (Deslauriers-Varin et al., 2011), we measured three categories of variables theorized to predict interviewees’ interrogation decision-making: respondents’ sociodemographic characteristics, criminological variables such as arrest and incarceration history, and contextual characteristics of the interrogation experience. See Cleary and Bull (2021) for a full description of these additional variables.

**Sociodemographic.** Respondents indicated their age, racial identity, and sex.

**Criminological.** Respondents indicated their number of lifetime arrests, number of lifetime incarcerations, conviction status, their sentence if conviction, and their current charge.

**Contextual.** A series of questions about respondents’ actual interrogation experience was presented, including the location of the interrogation; time of day of interrogation; estimated time between detainment and interrogation; and duration of interrogation. Respondents indicated whether they were read their *Miranda* rights or were asked to sign a waiver form; whether they had a lawyer present during questioning or consulted with a lawyer before questioning; and whether physical restraints were used, their interrogation was electronically recorded, their arrest status, and whether they felt free to leave. The remaining contextual items included the degree of incriminating evidence respondents felt police had available and respondents’ pre-interrogation confession intent (i.e., intended to confess, intended to deny, undecided).

**Procedure**

 Study approval was obtained from the second author’s institutional review board and the jail sites’ superintendents. Two jail facilities were visited for this convenience sample: a city jail with two housing units, and a large regional jail serving surrounding cities and counties with 18 housing units. These units ranged from smaller units housing 18 detained individuals to larger units that could accommodate up to 92 individuals. The researcher explained the study’s purpose and procedures, emphasizing that participation was voluntary and that all information would be kept anonymous. Individuals who were interested in participating were then provided a consent form and the questionnaire, which they completed individually in either their cells or open common areas. Waiver of documentation of consent ensured participant anonymity. Response rates per housing unit ranged from 11% to 94%, with an overall response rate of 40.7%.

**Results**

**Analytic Approach**

Data were initially screened for univariate outliers and missing data prior to all analyses. All predictor variables had less than 10% missing values and outcome variables had less than 5% missing values; the following analyses were performed using listwise deletion and sample sizes are reported for each respective analysis. We first provide descriptive data on the 25 items related to the interrogation techniques respondents reported experiencing. We next present results from an exploratory factor analysis that investigated underlying factor structure. The resulting factor structure was then used in a series of multinominal logistic regressions to predict respondents’ three decision-making outcomes: (a) confession (0 = denied), (b) cooperation (0 = did not cooperate at all), and (c) disclosure (0 = disclosed no information).

Following these primary analyses, we conducted a series of sensitivity analyses to determine whether sociodemographic, criminogenic, or contextual factors impacted the associations found in the primary analyses. We first examined bivariate associations between each factor and respondents’ confession, cooperation, and disclosure decisions. Associations that were significant in cross-tabular assessments were then entered as predictors in step two of a hierarchical multinominal logistic regression, after the interrogation technique factors generated via EFA were entered in step one. Note that only interrogation techniques that significantly predicted confession, cooperation, or disclosure in the primary analyses were included as predictors in their respective sensitivity models. This allowed for better powered, more robust sensitivity models. The goal was to assess the role of sociodemographic, criminological, and contextual factors in incarcerated individuals’ interrogation decision-making after accounting for the interrogation techniques that respondents experienced.

**Descriptive Analyses**

Means and standard deviations for the 25 interrogation techniques experienced items appear in Table 1. Across the 25 techniques, respondents most strongly agreed that *The police officer already believed I was guilty before we even started talking* (*M* = 4.13); 48.9% (*n* = 109) of respondents strongly agreed and 27.8% (*n* = 62) agreed that this technique was used when they were interrogated. The second most reported technique was *The police officer accused me of the crime* (*M* = 4.01); 38.7% (*n* = 91) strongly agreed and 40% (*n* = 94) agreed this technique was used. Regarding less frequently used techniques, respondents strongly disagreed *The police officer offered me things to make me comfortable (such as food, drink, cigarette, blanket)* (*M* = 2.04); 48% (*n* = 109) strongly disagreed and 26.9% (*n* = 61) disagreed that this technique was used when they were interrogated. This was followed by *The police officer joked around with me* (*M* = 2.29); over one-third of respondents (36%; *n* = 81) disagreed and 28% (*n* = 63) strongly disagreed that officers used this technique during their interrogation.

**Exploratory Factor Analysis**

We conducted exploratory factor analysis on the 25 interrogation items regarding techniques that incarcerated individuals self-reported experiencing during interrogation. We screened the data for outliers (standardized *z* scores > 3.29) and multicollinearity and examined the factorability of the correlation matrix. No cases were identified as univariate outliers, and multicollinearity issues were not apparent. Principal axis factor analysis (FA) with oblique (direct oblimin) rotation was performed with the 25 items. Items with loadings of 0.40 were retained (Field, 2018); three items with cross-loadings were excluded, leading to FA of the remaining 22 items. Several indicators suggested suitability for FA: numerous pairs of significant (*p* < .05) inter-item correlations, near-zero values in the anti-image correlation matrix, significant Bartlett’s test for sphericity (χ2 = 2242.84, *p* < .001), and a high Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (KMO = .92). Eigenvalues and the scree plot suggested a four-factor solution, which accounted for 52.9% of the total variance. The final rotated factor solution is presented in Table 1.

 The first factor, here labeled *humanity*, included seven items and accounted for 38.4% of the variance. Items in this factor pertained to perceptions of the officer being respectful, friendly, and open-minded. The composite score mean across the seven items was 2.7 (*SD* = 1.0) and the factor had good internal consistency (Cronbach’s α = .90). The second factor, labeled *rapport/relationship-building*, included three items and accounted for 7.3% of the variance. Items in this factor included strategies officers may use to establish rapport with an interviewee, including joking, asking personal questions, and meeting basic needs. The composite score mean was 2.3 (*SD* = 0.9). Alpha for this factor was lower than conventional guidelines (α = .55) yet was not unexpected given the small number of items on this component (Field, 2018).

 The third factor, labeled *confrontation*, included seven items and accounted for 4.7% of the variance. Items in this factor pertained to perceptions that the interrogating officer held a presumption of guilt, engaged in direct accusations, and used (false) evidence to imply guilt. The composite score mean was 3.7 (*SD* = 0.9), with good internal consistency (α = .84). The final factor, labeled *dominance/control*, included five items and accounted for 2.6% of the variance. Items in this factor related to hostility, aggression, and exerting authority over the interviewee. The composite score mean was 3.2 (*SD* = 1.0), with good internal consistency (α = .81).

A repeated measures ANOVA showed a significant multivariate main effect of composite scores across these four factors, *F*(1, 226) = 37.22, *p* < .001, partial η2 = .14. Respondents were most likely to agree that police interrogated them with a *confrontation* approach, followed by a *dominance/control* approach. Respondents were most likely to disagree that officers used the *rapport/relationship-building* approach during their interrogation, and similarly disagreed that the *humanity* approach was used. Pairwise comparisons of estimated marginal means showed all factors were significantly different from one another at *p* < .01.

Correlations between mean composite scores showed the two accusatorial approaches—confrontational and dominance—were positively and significantly correlated (*r* = .68, *p* < .001, 95% CI [.60, .74]). Similarly, the reported use of humanity and rapport/relationship building—two information-gathering approaches—were positively and significantly correlated (*r* = .34, *p* < .001, 95% CI [.20, .44]). Humanity was significantly negatively correlated with both confrontational (*r* = -.61, *p* < .001, 95% CI [-.69, -.53]) and dominance approaches (*r* = -.68, *p* < .001, 95% CI [-.75, -.61]). Finally, rapport/relationship building was significantly negatively correlated with confrontational (*r* = -.14, *p* = .04, 95% CI [-.26, -.01]) but not significantly related to dominance (*r* = -.12, *p* = .07, 95% CI [-.25, .01]).

**Primary Analyses: Interrogation Approaches Predicting Interrogation Outcomes**

***Confession***

The overall model predicting self-reported confession was significant, χ2 = 76.76, *p* < .001, *R*2Nagelkerke = .34. The humanity interrogation approach significantly predicted confessions, χ2 = 36.89, *p* < .001, as did the dominance/control interrogation approach, χ2 = 7.15, *p* = .03. Use of humane interrogation techniques significantly predicted whether respondents provided a partial confession (*p* < .001, exp(*B*) = 5.03), or a full confession (*p* < .001, exp(*B*) = 4.14). A one-point increase in reported use of humanity interrogation techniques was associated with 403% increased odds of a partial confession and 314% increased odds of a full confession as compared to a denial. Use of dominance/control-oriented interrogation approaches significantly predicted partial confessions (*p* = .01, exp(*B*) = 2.24), but not full confessions (*p* = .13, exp(*B*) = 1.62). Rapport-building and confrontation interrogation approaches did not significantly predict confessions (Table 2).

***Cooperation***

 The overall model predicting cooperation was significant, χ2 = 32.97, *p* < .001, *R*2Nagelkerke = .15. Only the humanity approach significantly predicted cooperation, χ2 = 8.05, *p* = .045. Use of humane interrogation techniques significantly predicted whether respondents completely cooperated compared to not at all (*p* = .02, exp(*B*) = 1.81). A one-point increase in reported use of humanity interrogation techniques was associated with 81% increased odds of complete cooperation. However, the humanity approach did not significantly predict respondents cooperating a little or cooperating a lot (Table 2). Rapport-building, confrontation, and dominance/control interrogation approaches did not significantly predict cooperation.

***Disclosure***

The overall model predicting information disclosure was significant, χ2 = 35.78, *p* < .001, *R*2Nagelkerke = .16. Similar to cooperation, only the humanity approach significantly predicted disclosure, χ2 = 14.19, *p* = .003. Use of humane interrogation techniques significantly predicted whether respondents disclosed a lot of information (*p* = .01, exp(*B*) = 3.03), or disclosed information about everything (*p* = .004, exp(*B*) = 2.54). Specifically, a one-point increase in reported use of humanity interrogation techniques was associated with 203% increased odds of disclosing a lot of information and 154% increased odds of disclosing everything, as compared to disclosing no information. The humanity approach did not significantly predict whether respondents disclosed a little information (Table 2). Moreover, rapport-building, confrontation, and dominance/control interrogation approaches did not significantly predict disclosure.

**Sensitivity Analyses: Sociodemographic, Criminological, and Contextual Factors**

 Item-level statistics and group frequencies for bivariate associations between the additional measures and respondents’ reported confession, cooperation, and disclosure decisions, respectively, can be found in Supplemental Table 1. The following factors were significantly associated (*p* < .05) with all three interrogation outcomes: respondents’ sex, racial identity, written Miranda waiver, and pre-interrogation confession intent. Perceived strength of evidence was significantly associated with confession and disclosure, but not cooperation. A few factors were significantly associated with just one of the interrogation outcomes. Being physically restrained was significantly associated with confession decision; being verbally Mirandized with disclosure; and arrest status, charge category, and conviction status with cooperation.

 A series of hierarchical multinomial logistic regressions were used to predict respondents’ three decision-making outcomes. The first (baseline) models included interrogation approach(es) that were significant in primary analyses; the second (full) models added factors that were significantly associated with respective outcomes in a forward entry stepwise fashion. Several of these factors were collapsed for parsimony prior to modeling (Table 3).

***Confession***

 Pre-interrogation confession intent and perceived strength of evidence significantly predicted confession decision (χ2 = 34.16, *p* < .001; χ2 = 13.56, *p* = .001, respectively), along with humanity and dominance/control interrogation approaches (χ2 = 35.02, *p* < .001; χ2 = 7.39, *p* = .03, respectively). Inclusion of these additional factors showed a marked improvement in pseudo-*R*2 compared to primary analyses (*R*2Nagelkerke = .49; model fit: χ2 = 122.07, *p* < .001). First, compared to those who did not plan to confess, respondents who entered the interrogation planning to confess were about five times more likely to partially confess (*p* = .002, exp(*B*) = 5.58) and 20 times more likely to fully confess (*p* < .001, exp(*B*) = 20.79) compared to deny (reference category). Next, compared to those who perceived weak or no evidence, those who perceived strong evidence of their guilt were more likely to partially confess (*p* = .02, exp(*B*) = 3.05) or fully confess (*p* < .001, exp(*B*) = 6.63). Similar to primary analyses, use of humanity interrogation techniques predicted increased odds of partial confession (*p* < .001, exp(*B*) = 4.81) and full confession (*p* < .001, exp(*B*) = 4.08) while controlling for pre-interrogation confession intent and perceived strength of evidence. Dominance interrogation techniques again predicted only partial confession (*p* = .01, exp(*B*) = 2.08).

***Cooperation***

Significant predictors of cooperation included pre-interrogation confession intent (χ2 = 34.48, *p* < .001), respondent race (χ2 = 12.54, *p* = .01), and conviction status (χ2 = 11.14, *p* = .01) significantly predicted cooperation, as did the humanity approach (χ2 = 8.29, *p* = .04). Inclusion of these factors showed a marked improvement in pseudo-*R*2 compared to primary analyses (*R*2Nagelkerke = .35; model fit: χ2 = 80.35, *p* < .001). Compared to White respondents, respondents who identified as Black or other racial identities were less likely to cooperate a little (*p* = .002, exp(*B*) = 0.23), cooperate a lot (*p* = .01, exp(*B*) = 0.25), or completely cooperate (*p* = .02, exp(*B*) = 0.34), as compared to not cooperating at all (reference category). Next, conviction status and pre-interrogation confession decision significantly predicted cooperating a lot or completely. Compared to those who had not decided to confess prior to interrogation, respondents who intended to confess were more likely to cooperate a lot (*p* = .001, exp(*B*) = 38.61) or cooperate completely (*p* < .001, exp(*B*) = 35.32). Last, compared to those who were not convicted at the time of the study, those who were convicted were less likely to cooperate a lot (*p* = .002, exp(*B*) = 0.16) or cooperate completely (*p* = .02, exp(*B*) = 0.33). Like primary analyses, use of humanity interrogation techniques only increased odds of respondents cooperating completely (*p* = .04, exp(*B*) = 1.53).

***Disclosure***

Pre-interrogation confession intent and respondent racial identity significantly predicted information disclosure (χ2 = 44.48, *p* < .001; χ2 = 8.20, *p* = .04, respectively), along with the humanity interrogation approach (χ2 = 13.09, *p* = .004). Inclusion of these additional factors showed a marked improvement in pseudo-*R*2 compared to primary analyses (*R*2Nagelkerke = .36; model fit: χ2 = 87.27, *p* < .001). Compared to White respondents, respondents who identified as Black or other racial identities were less likely to disclose everything (*p* = .01, exp(*B*) = 0.26), as compared to nothing (reference category). Respondents who entered the interrogation planning to confess were more likely to disclose a little information (*p* = .04, exp(*B*) = 2.78) or everything (*p* < .001, exp(*B*) = 27.43), as compared to nothing. Echoing primary analyses, use of humanity interrogation techniques increased odds of respondents reporting disclosing a lot of information (*p* < .001, exp(*B*) = 2.55). However, unlike primary analyses, humanity no longer predicted respondents disclosing everything (*p* = .10) when pre-interrogation confession intent and respondent racial identity were included in the model.

**Discussion**

 This study is among the few to examine the interrogation experiences of individuals incarcerated in the U.S. and is the first to examine how the interrogation techniques they reported experiencing relate to their decisions to confess, cooperate with police, and disclose incriminating information. We found that persons suspected of a crime who reported more police use of humanitarian strategies were more likely to confess, fully cooperate, disclose a lot of incriminating information or even disclose everything. Interviewees who reported more police use of dominance/control-oriented techniques were more likely to confess, but dominance did not predict cooperation or disclosure.

**Interviewees’ Reported use of Police Interrogation Techniques**

 Exploratory factor analysis revealed a four-factor structure of interrogation techniques experienced by respondents, which were labeled and interpreted as *humanity, rapport/relationship-building, confrontation,* and *dominance/control.* These factors and the respective items loading onto them are consistent with approaches found in prior interviewee-focused research (Cleary & Bull, 2019; Goodman-Delahunty et al., 2014; Holmberg & Christianson, 2002; Kebbell et al., 2010; Snook et al., 2015; Wachi et al., 2016a). Respondents in the present sample were most likely to agree that police used *confrontation* and *dominance/control* strategies. These factors included items related to presumptions of guilt and direct accusations (*confrontation*), and hostility, aggression, and authority (*dominance/control*). Both approaches can be classified under the broader umbrella of accusatorial methods. Given that police in the U.S. are most often trained in and use accusatorial methods (Cleary & Warner, 2016), it is not particularly surprising that this sample of individuals incarcerated in the U.S. reported being questioned with these techniques. Indeed, when examining means of individual items, over three-fourths of respondents strongly agreed or agreed that the interrogating officer already seemed to believe they were guilty before they started talking. A presumption of guilt is the foundation of a common accusatorial training paradigm in the U.S.—the Reid Technique—which trains officers to only interrogate people whom they believe are guilty. However, research has clearly established that this presumption of guilt, along with the other confrontational tactics used in accusatorial methods, can lead to less diagnostic confession outcomes (Meissner et al., 2014), making these methods particularly harmful for use with innocent people (Scherr et al., 2020). Moreover, research with interviewees shows that persons suspected of crimes are not supportive of accusatorial methods (Cleary & Bull, 2019), as they perceive these techniques as unfair (Kebbell et al., 2008).

 Respondents in the present study tended to disagree that police used *humane* and *rapport/relationship-building* strategies, both of which are key components of information-gathering methods (Milne & Bull, 1999; Mendez, 2021). These approaches encompass techniques related to police being respectful, friendly, and open-minded (*humanity*) and engaging in strategies to build rapport with the interviewee (*rapport/relationship-building*). Two of the three rapport/relationship-building items were reported as the least used techniques across the current sample. The apparent lack of rapport-building techniques used with this U.S. sample is concerning, as researchers consider rapport as “the cornerstone of any attempt to successfully elicit information” (Kelly et al., 2013, p. 169). However, only three items loaded onto this component during factor analysis, which also had a below-standard alpha. Thus, we suggest caution in its interpretation. Future research should examine nuances of U.S. interviewees’ perceptions of rapport by providing respondents with a more exhaustive list of strategies.

**Associations between Interrogation Techniques and Outcomes**

 The humanity technique emerged as the approach most predictive of interrogation outcomes. Specifically, use of humane interrogation strategies significantly predicted respondents’ likelihood to partially or fully confess (versus denial). These findings are consistent with prior studies that collected data from persons suspected of a crime; those studies reported that humanitarian techniques predicted confessions among incarcerated persons in Sweden (Holmberg & Christianson, 2002), Australia (Kebbell et al., 2010), Germany (May et al., 2021), Canada (Snook et al., 2015), and Japan (Wachi et al., 2016a). These findings are particularly meaningful coming from the current sample, as U.S. investigators have been widely trained in—and frequently use—accusatorial approaches characterized by hostility, dominance, and control (Cleary & Warner, 2016). Police who doubt the utility of humanity approaches may be encouraged to learn that persons suspected of a crime reported providing confessions in interrogations where humane techniques were employed. Provided the interviewees are actually guilty—a question we could not ethically assess in this largely pretrial sample—this finding represents an empirically-supported path forward for interrogation practice in the U.S.

 We found that dominance/control-oriented strategies also predicted confession to a degree (i.e., partial confession). It is not surprising that persons suspected of a crime are responsive to these strategies. Research consistently shows that threats, intimidation, and emotion provocation are effective approaches for generating confessions. The problem with these approaches is that they obscure our ability to differentiate between factually guilty and innocent individuals (Meissner et al., 2014). We were not able to ask respondents about their guilty status for ethical reasons because much of our sample had not yet been adjudicated. Future research occurring post-conviction may consider this approach (though see Cleary & Bull, 2021 for drawbacks). Moreover, though dominance/control predicted (partial) confessions, this approach did not significantly predict respondents’ cooperation nor their disclosure of information. This disconnect may suggest that those who confessed after experiencing dominance techniques were reluctant to do so and may even be less satisfied with their confessions compared to those interrogated with more humanitarian techniques (see Wachi et al., 2016b). This could have important implications for both confession voluntariness and reliability. One could argue that interviewees who are “bullied” into a confession via law enforcement demonstrations of control are not giving confessions voluntarily as the law requires. Moreover, confessions that occur absent information disclosure and/or via interviewee resistance may yield fewer investigative details to corroborate the confession. Overall, this explanation is speculative, and more research is needed to understand associations among interviewees’ decisions to confess, cooperate, and disclose information.

 The present study is the first to our knowledge to examine the impact of interrogation techniques on outcomes beyond confessions from the perspective of persons suspected of a crime in the U.S. We found that humane interrogation strategies significantly predicted respondents who cooperated completely with police (versus not cooperating at all) and disclosed a lot of incriminating evidence or disclosed everything (versus not disclosing any information)—findings consistent with those of persons incarcerated in Canada (Snook et al., 2015). Humane techniques increase interviewees’ perceptions of interrogations as fair (Cleary & Bull, 2019; Kebbell et al., 2008), which can lead to their greater willingness to cooperate and disclose incriminating information (Brimbal et al., 2021). This study provides further evidence for the importance of questioning persons suspected of a crime using humane techniques and extends these findings to a U.S. sample.

 Contrary to prior research (e.g., Holmberg & Christianson, 2002; Kebbell et al., 2010), the use of dominance strategies also predicted a higher likelihood of partial confessions among our sample of individuals incarcerated in the U.S. A comparison of effect sizes (odds ratios) between the humane and dominance/control approaches, however, suggests that humane approaches are the strongest predictors of confession. Specifically, respondents reportedly experiencing dominance strategies increased the odds of them having *partially* confessed by 124%, compared to 402% when humane strategies were used—more than a three-fold increase. Moreover, dominance/control strategies did not relate to respondents’ self-reported *full* confessions. The role of dominance/control techniques in confessions warrants further research. It may be that those who partially confessed from use of such strategies were also more likely to be innocent, as many of the dominance/control factor items are representative of accusatorial methods, which increase false confessions from innocent individuals (Meissner et al., 2014). Future research can examine how, from interviewees’ perspectives, interrogation approaches differentially relate to interrogation decisions while taking into account self-reported guilt or innocence (e.g., May et al., 2021).

 Finally, rapport-based and confrontational interrogation techniques did not predict any of our outcome variables of interest. It is difficult to directly compare these findings with prior work because the few studies that use interrogation techniques to predict outcomes with samples of persons suspected of a crime have adopted different conceptual and methodological approaches. Goodman-Delahunty et al. (2014) characterized interview strategies as legalistic, physical, cognitive, and social and identified both coercive and non-coercive subtypes of each, which does not directly map onto rapport. In contrast, Snook et al. (2015) used data reduction techniques to factor analyze discrete aspects of interviewers’ behaviors, similar to the present study. That study yielded only one clean factor (labeled ‘Humanitarian’) from 30 items, whereas the present study yielded four distinct, interpretable factors. Our confrontation factor contained a mixture of guilt presumptive, accusatorial techniques including evidence ploys. These strategies are known to increase both true and false confessions (Meissner et al., 2014), but they did not predict interrogation outcomes in the present study. Our rapport factor had lower internal consistency compared to the other three, which may indicate some conceptual ambiguity that could obscure the potential role of rapport-building approaches in generating confessions, cooperation, and information disclosure.

 Sensitivity analyses showed several individual and contextual factors conditioned some of the associations between interrogation approach and interrogation outcomes. Respondents who self-identified as White were more likely to disclose information, cooperate with police, and confess than respondents who identified as a different race. The confession outcome replicates Cleary and Bull (2021) and extends this finding by showing differences by racial group for cooperation and disclosure. This pattern could stem from the mistrust of police experienced by Black, Indigenous, and People of Color as a result of systemic racism and decades of over-policing Black communities (Jones-Brown & Williams, 2021). While we do not know the racial identity of our respondents’ interrogators, the majority of American law enforcement officers are White (Goodison, 2022), and it is possible that rapport is more difficult to establish between individuals of different racial identities, especially when the person suspected of the crime is Black and the legal authority figure is White (see Fenn et al., 2019).

 We also found that respondents’ confession intent predicted full confession, cooperation, and disclosure. To the extent that respondents’ retrospective assessments are accurate, this finding echoes prior work undermining the assumption that all persons suspected of a crime enter police interrogation with determined proclamations of innocence. Aggressive questioning techniques in these instances may be unnecessary at best and counterproductive at worst (Cleary & Bull, 2021; Wachi et al., 2016b). This relates to our finding that perceptions of strong evidence predicted confessions but not cooperation or disclosure. That is, persons suspected of a crime who perceive that police have significant incriminating evidence of their guilt are more likely to confess but not necessarily cooperate readily along the way. This speaks to the possible power of evidence ploys in garnering confessions. In a growing number of countries (including the U.K.), police are explicitly trained not to use false evidence ploys not only because such use goes against the ethos of a humane approach but also because such use can easily ‘backfire’ when a (guilty) interviewee (who might be considering confessing) realizes/knows that what the interviewer is claiming is incorrect/untrue.

**Limitations**

 Several limitations of the current study should be noted. First, survey length considerations prevented us from presenting respondents with an exhaustive list of interrogation techniques. While the 25 items we included did clearly load onto latent factors that were both theoretically and empirically consistent with prior work, it is possible that a different or longer list of techniques might have yielded different predictive outcomes for our three outcome variables. For example, rapport-oriented techniques have been linked to cooperation (Kelly et al., 2013), despite the field’s challenges with operationally defining rapport (see Gabbert et al., 2021). Second, even though interviewees’ own perspectives are incredibly important to assess and have generally lagged behind work examining police perspectives (e.g., Cleary & Warner, 2016) or laboratory models of technique usage (see Meissner et al., 2014), they are still limited in that they cannot capture in vivo shifts in interrogators’ tactics or interviewees’ thought processes. Thus, this study relies on respondents’ memory and recall of interrogators’ tactics, which could be incomplete or inaccurate. Third, it is possible that part 1 of the survey (pertaining to attitudes about interrogations generally) could have influenced participants’ responses to part 2 (pertaining to their own interrogation experiences). Sample size limitations precluded us from assessing these constructs via separate surveys. Fourth, only a small proportion of the sample was questioned in connection with crimes against persons, which likely influenced the tactics interrogators used when questioning them. Leo (2008) noted that interrogations are a key source of evidence in high-profile cases where police face intense pressure to solve the case, and investigators questioning interviewees about serious felonies (e.g., murder) likely use more confrontational tactics to elicit confessions. The literature would benefit from replication studies with people interrogated and charged with more serious crimes. Finally, this cross-sectional design cannot determine whether interrogation approaches specifically caused the interrogation outcomes we measured or whether reverse causation occurred. It is possible, for example, that persons suspected of a crime who were cooperative at the outset reduced investigators’ need or desire to employ control-oriented strategies.

**Conclusions**

 No matter what interrogation strategies interviewers use, it is ultimately the interviewee who decides whether to cooperate with police, disclose incriminating information, and confess to a crime. The present study adds to a growing body of research demonstrating the importance of including the perspectives of persons suspected of a crime when investigating how interrogation techniques differentially predict interrogation outcomes. The present study also advances the interrogation literature toward assessing outcomes beyond “merely” confession, especially confession measured in only a binary fashion. Cooperation with law enforcement and disclosure of incriminating information are productive interrogation outcomes in a literal sense; they *produce* (ideally) details of evidentiary value that assist law enforcement with investigating and solving crimes. This study found that humane interrogation strategies significantly predicted all three interrogation outcomes. Our findings that confrontational and dominance/control-oriented techniques did not consistently predict favorable interrogation outcomes, but that humane techniques did, provide further evidence that accusatorial approaches are less effective compared to information-gathering and ethical approaches in a sample of individuals incarcerated in the U.S.

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**Endnotes**

 Custodial interrogation was defined in the questionnaire as ‘the police asked you questions about a potential crime, and you were either under arrest or did not feel free to leave while the police questioned you.’

**Table 1.**

*Exploratory Factor Analysis of Interrogation Techniques Experienced by Interviewees (N = 189)*

|  |  |  |
| --- | --- | --- |
|   |   | Rotated Factor Loadings |
|  | *M* (SD) | 1 | 2 | 3 | 4 |
| *Factor 1: Humanity* |  |  |   |   |   |
| The police officer let me tell my side of the story. | 2.96 (1.30) | **0.57** | 0.02 | 0.11 | -0.11 |
| The police officer was hostile toward me. (r) | 2.77 (1.29) | **0.68** | 0.02 | -0.20 | 0.37 |
| The police officer acted in a professional manner. | 2.74 (1.31) | **0.77** | 0.07 | 0.03 | 0.05 |
| The police officer listened to me carefully. | 2.73 (1.29) | **0.50** | 0.17 | 0.26 | 0.03 |
| The police officer was polite to me. | 2.58 (1.29) | **0.79** | -0.06 | 0.07 | -0.01 |
| The police officer treated me with respect. | 2.56 (1.26) | **0.62** | 0.1 | 0.23 | 0.17 |
| The police officer was friendly to me. | 2.48 (1.23) | **0.77** | 0.12 | 0 | -0.02 |
| *Factor 2: Rapport/Relationship-Building* |  |  |  |  |  |
| The police officer asked me questions about my personal life to be nice to me. | 2.61 (1.37) | 0.08 | **0.57** | 0.01 | -0.10 |
| The police officer joked around with me. | 2.29 (1.13) | -0.05 | **0.72** | -0.08 | 0.14 |
| The police officer offered me things to make me comfortable (such as food, drink, cigarette, blanket). | 2.04 (1.31) | -0.02 | **0.47** | 0.07 | -0.06 |
| *Factor 3: Confrontation* |  |  |  |  |  |
| The police officer already believed I was guilty before we even started talking. | 4.13 (1.08) | 0.06 | 0.05 | **0.75** | -0.06 |
| The police officer accused me of the crime. | 4.01 (1.10) | -0.02 | 0.08 | **0.66** | -0.04 |
| The police officer told me he had evidence that I was guilty. | 3.70 (1.28) | -0.19 | -0.06 | **0.49** | 0.28 |
| The police officer was just asking me for information, not accusing me of anything. (r) | 3.68 (1.29) | 0.23 | -0.03 | **0.60** | -0.04 |
| The police officer made it clear that he didn’t believe me. | 3.58 (1.34) | 0.32 | 0.03 | **0.55** | 0.20 |
| The police officer accused me of lying. | 3.47 (1.42) | 0.16 | 0.06 | **0.42** | 0.33 |
| The police officer lied about having evidence against me. | 3.25 (1.40) | 0.22 | -0.12 | **0.41** | 0.20 |
| *Factor 4: Dominance/Control* |  |  |  |  |  |
| The police officer tried to intimidate me. | 3.53 (1.39) | 0.32 | 0.05 | 0.06 | **0.56** |
| The police officer disrespected me. | 3.23 (1.36) | 0.44 | 0.03 | -0.01 | **0.53** |
| The police officer intentionally interrupted me when I was talking. | 3.23 (1.36) | 0.22 | 0.09 | 0.19 | **0.45** |
| The police officer said I would feel better if I confessed. | 2.88 (1.34) | -0.09 | -0.11 | 0.08 | **0.58** |
| The police officer threatened me. | 2.82 (1.37) | 0.23 | 0.11 | 0.17 | **0.41** |
| % of variance |   | 38.41 | 7.27 | 4.67 | 2.58 |
| α |   | .90 | .55 | .84 | .81 |

*Note.* Items retained for factors appear in bold. (r) indicates negatively worded item that was reverse scored for means reporting and reliability analyses.

**Table 2.**

*Multinominal Logistic Regressions of Interrogation Approach Predicting Self-Reported Confession, Level of Cooperation, and Level of Information Disclosure*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   | Interrogation Approach | *B* (SE) | Wald χ2 | Exp(*B*) | 95% CI Exp(*B*) |
|  |  |  |  |  | LL | UL |
| *Outcome: Confession (N = 219)* |
| Partial Confession vs. Denial |  |  |  |  |
|  | Intercept | -7.50\*\*\* (1.87) | 16.10 |  |  |  |
|  | Humanity | 1.62\*\*\* (0.34) | 22.76 | 5.03 | 2.59 | 9.76 |
|  | Rapport | 0.27 (0.22) | 1.52 | 1.31 | 0.85 | 2.01 |
|  | Confrontation | -0.23 (0.29) | 0.61 | 0.80 | 0.45 | 1.41 |
|  | Dominance | 0.81\* (0.32) | 6.35 | 2.24 | 1.20 | 4.21 |
| Full Confession vs. Denial |  |  |  |  |
|  | Intercept | -4.25\*\*\* (1.79) | 5.67 |  |  |  |
|  | Humanity | 1.42\*\*\* (0.33) | 17.61 | 4.14 | 2.13 | 8.04 |
|  | Rapport | 0.02 (0.23) | 0.01 | 1.02 | 0.65 | 1.62 |
|  | Confrontation | -0.56 (0.29) | 3.70 | 0.57 | 0.32 | 1.01 |
|  | Dominance | 0.48 (0.32) | 2.30 | 1.62 | 0.87 | 3.02 |
| *Outcome: Cooperation (N = 221)* |
| Cooperated A Little vs. Did Not Cooperate |  |  |  |  |
|  | Intercept | -2.33 (1.91) | 1.48 |  |  |  |
|  | Humanity | -0.13 (0.33) | 0.15 | 0.88 | 0.47 | 1.67 |
|  | Rapport | 0.21 (0.24) | 0.79 | 1.24 | 0.77 | 1.98 |
|  | Confrontation | 0.51 (0.36) | 1.97 | 1.66 | 0.82 | 3.37 |
|  | Dominance | -0.15 (0.33) | 0.20 | 0.86 | 0.45 | 1.65 |
| Cooperated A Lot vs. Did Not Cooperate |  |  |  |  |
|  | Intercept | -1.56 (2.10) | 0.55 |  |  |  |
|  | Humanity | 0.38 (0.37) | 1.07 | 1.47 | 0.71 | 3.02 |
|  | Rapport | -0.32 (0.30) | 1.14 | 0.72 | 0.40 | 1.31 |
|  | Confrontation | 0.47 (0.38) | 1.53 | 1.60 | 0.76 | 3.35 |
|  | Dominance | -0.45 (0.36) | 1.60 | 0.64 | 0.31 | 1.28 |
| Cooperated Completely vs. Did Not Cooperate |
|  | Intercept | -0.67 (1.43) | 0.22 |  |  |  |
|  | Humanity | 0.59\* (0.26) | 5.36 | 1.81 | 1.09 | 2.98 |
|  | Rapport | -0.07 (0.20) | 0.12 | 0.93 | 0.63 | 1.38 |
|  | Confrontation | 0.14 (0.26) | 0.29 | 1.15 | 0.69 | 1.90 |
|  | Dominance | -0.26 (0.26) | 1.01 | 0.77 | 0.47 | 1.28 |
| *Outcome: Information Disclosure (N = 223)* |
| Disclosed A Little vs. No Information |  |  |  |  |
|  | Intercept | -2.98 (1.65) | 3.27 |  |  |  |
|  | Humanity | 0.40 (0.29) | 1.88 | 1.48 | 0.84 | 2.61 |
|  | Rapport | 0.32 (0.21) | 2.28 | 1.37 | 0.91 | 2.07 |
|  | Confrontation | -0.20 (0.29) | 0.47 | 0.82 | 0.47 | 1.45 |
|  | Dominance | 0.25 (0.29) | 0.72 | 1.28 | 0.72 | 2.27 |
| Disclosed A Lot vs. No Information |  |  |  |  |
|  | Intercept | -5.69 (2.34) | 5.86 |  |  |  |
|  | Humanity | 1.11\*\* (0.42) | 7.06 | 3.03 | 1.34 | 6.84 |
|  | Rapport | 0.14 (0.29) | 0.24 | 1.15 | 0.66 | 2.02 |
|  | Confrontation | -0.13 (0.39) | 0.11 | 0.88 | 0.41 | 1.87 |
|  | Dominance | 0.27 (0.39) | 0.46 | 1.31 | 0.6 | 2.83 |
| Disclosed Everything vs. No Information |
|  | Intercept | -3.53 (1.77) | 3.98 |  |  |  |
|  | Humanity | 0.93\*\* (0.32) | 8.52 | 2.54 | 1.36 | 4.74 |
|  | Rapport | -0.01 (0.23) | 0.02 | 0.99 | 0.62 | 1.57 |
|  | Confrontation | -0.23 (0.30) | 0.61 | 0.79 | 0.44 | 1.42 |
|   | Dominance | 0.19 (0.30) | 0.37 | 1.20 | 0.66 | 2.19 |

*Note*. CI = confidence interval for Exp(*B*); LL = lower limit; UL = upper limit.

\**p* < .05; \*\**p* < .01, \*\*\**p* < .001

**Table 3.**

*Sensitivity Models: Hierarchical Multinominal Logistic Regressions of Interrogation Approach Predicting Self-Reported Confession, Level of Cooperation, and Level of Information Disclosure with Sociodemographic, Criminological, and Contextual Factor Controls.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   | Interrogation Approach | *B* (SE) | Wald χ2 | Exp(*B*) | 95% CI Exp(*B*) |
|  |  |  |  |  | LL | UL |
| *Outcome: Confession (N = 219)* |
| Partial Confession vs. Denial |  |  |  |  |
|  | Intercept | -7.70\*\*\* (1.72) | 20.06 |  |  |  |
|  | Humanity | 1.57\*\*\* (0.32) | 23.56 | 4.81 | 2.55 | 9.06 |
|  | Dominance | 0.73\* (0.29) | 6.50 | 2.08 | 1.18 | 3.65 |
|  | Confession intent | 1.72\*\* (0.55) | 9.65 | 5.58 | 1.89 | 16.50 |
|  | Evidence strength | 1.11\* (0.48) | 5.39 | 3.05 | 1.19 | 7.80 |
| Full Confession vs. Denial |  |  |  |  |
|  | Intercept | -7.52\*\*\* (2.09) | 12.93 |  |  |  |
|  | Humanity | 1.41\*\*\* (0.38) | 13.51 | 4.08 | 1.93 | 8.63 |
|  | Dominance | 0.46 (0.36) | 1.62 | 1.58 | 0.78 | 3.19 |
|  | Confession intent | 3.03\*\*\* (0.57) | 28.39 | 20.79 | 6.81 | 63.47 |
|  | Evidence strength | 1.89\*\*\* (0.53) | 2.30 | 6.63 | 2.37 | 18.56  |
| *Outcome: Cooperation (N = 221)* |
| Cooperated A Little vs. Did Not Cooperate |  |  |  |  |
|  | Intercept | 1.35 (0.77) | 3.04 |  |  |  |
|  | Humanity | -0.19 (0.26) | 0.51 | 0.83 | 0.50 | 1.38 |
|  | Respondent race | -1.49\*\* (0.47) | 9.86 | 0.23 | 0.09 | 0.57 |
|  | Confession intent | 1.85 (1.19) | 2.40 | 6.35 | 0.61 | 65.64 |
|  | Conviction status | -0.74 (0.52) | 2.02 | 0.48 | 0.17 | 1.32 |
| Cooperated A Lot vs. Did Not Cooperate |  |  |  |  |
|  | Intercept | 0.16 (0.90) | 0.03 |  |  |  |
|  | Humanity | 0.21 (0.29) | 0.52 | 1.23 | 0.70 | 2.18 |
|  | Respondent race | -1.39\* (0.57) | 6.00 | 0.25 | 0.08 | 0.76 |
|  | Confession intent | 3.65\*\* (1.13) | 10.48 | 38.61 | 4.23 | 352.54 |
|  | Conviction status | -1.82\*\* (0.58) | 9.85 | 0.16 | 0.05 | 0.51 |
| Cooperated Completely vs. Did Not Cooperate |
|  | Intercept | 0.39 (0.70) | 0.31 |  |  |  |
|  | Humanity | 0.42\* (0.22) | 3.80 | 1.53 | 1.01 | 2.34 |
|  | Respondent race | -1.04\* (0.43) | 5.95 | 0.34 | 0.15 | 0.82 |
|  | Confession intent | 3.56\*\*\* (1.05) | 11.64 | 35.32 | 4.56 | 273.71 |
|  | Conviction status | -1.10\* (0.45) | 5.84 | 0.33 | 0.14 | 0.81 |
| *Outcome: Information Disclosure (N = 223)* |
| Disclosed A Little vs. No Information |  |  |  |  |
|  | Intercept | -1.74\*\* (0.58) | 8.97 |  |  |  |
|  | Humanity | 0.33 (0.20) | 2.74 | 1.38 | 0.94 | 2.02 |
|  | Respondent race | -0.45 (0.37) | 1.50 | 0.64 | 0.31 | 1.31 |
|  | Confession intent | 1.02\* (0.49) | 4.33 | 2.78 | 1.06 | 7.29 |
| Disclosed A Lot vs. No Information |  |  |  |  |
|  | Intercept | -4.35\*\*\* (0.97) | 20.29 |  |  |  |
|  | Humanity | 0.94\*\*\* (0.28) | 10.86 | 2.55 | 1.46 | 4.45 |
|  | Respondent race | -0.43 (0.52) | 0.68 | 0.65 | 0.24 | 1.80 |
|  | Confession intent | 0.86 (0.63) | 1.88 | 2.37 | 0.69 | 8.13 |
| Disclosed Everything vs. No Information |
|  | Intercept | -2.90\*\*\* (0.80) | 13.17 |  |  |  |
|  | Humanity | 0.399 (0.25) | 2.30 | 1.47 | 0.89 | 2.42 |
|  | Respondent race | -1.36\*\* (0.49) | 7.70 | 0.26 | 0.10 | 0.67 |
|   | Confession intent | 3.31\*\*\* (0.56) | 35.65 | 27.43 | 9.25 | 81.34 |

*Note*. CI = confidence interval for Exp(*B*); LL = lower limit; UL = upper limit. Variables were coded as follows. Respondent race: as 0 = respondent identified as a minority racial group, 1 = non-minority racial group. Confession intent: 0 = did not decide to confess before interrogation, 1 = decided to confess before interrogation. Evidence strength: 0 = respondent perceived weak or no evidence against them or did not know, 1 = perceived strong evidence. Conviction status: 0 = respondent not convicted at time of survey, 1 = convicted.

\**p* < .05; \*\**p* < .01, \*\*\**p* < .001

**Supplemental Information**

**Supplemental Table 1.**

*Significant Associations between Sociodemographic, Criminological, and Contextual Factors and Self-Reported Confession, Cooperation, and Disclosure.*

|  |  |  |  |
| --- | --- | --- | --- |
|   | Confession Decision | Cooperation | Disclosure |
|   | % Confessed | χ2 | η2 | % Cooperated | χ2 | η2 | % Disclosed information | χ2 | η2 |
| *Sociodemographic Factors* |
| Respondents’ Sex |  | 4.38\* | 0.14 |  | 6.91\*\* | 0.17 |  | 5.84\* | 0.16 |
| Female | 64.5% |  |  | 90.9% |  |  | 63.6% |  |  |
| Male | 44.4% |  |  | 68.6% |  |  | 41.1% |  |  |
| Respondents’ Racial Identity |  | 13.47\*\* | 0.24 |  | 18.85\*\*\* | 0.28 |  | 14.51\*\*\* | 0.25 |
| Black | 36.2% |  |  | 60.7% |  |  | 31.9% |  |  |
| White | 61.5% |  |  | 86.7% |  |  | 57.1% |  |  |
| Other/multiple racial identities | 45.5% |   |   | 62.5% |   |   | 52.2% |   |   |
| *Contextual Factors* |
| Written Miranda waiver |  | 7.33\* | 0.18 |  | 11.85\*\* | 0.22 |  | 14.79\*\*\* | 0.25 |
| Not presented | 44.1% |  |  | 69.4% |  |  | 40.4% |  |  |
| Presented, did not sign | 30.8% |  |  | 46.2% |  |  | 23.1% |  |  |
| Presented and signed | 67.7% |  |  | 93.5% |  |  | 74.2% |  |  |
| Confession intent |  | 74.33\*\*\* | 0.57 |  | 61.97\*\*\* | 0.52 |  | 65.52\*\*\* | 0.53 |
| Intended to confess | 86.2% |  |  | 98.3% |  |  | 81.4% |  |  |
| Intended to deny | 15.4% |  |  | 43.8% |  |  | 15.4% |  |  |
| Had not decided | 55.0% |  |  | 84.3% |  |  | 52.4% |  |  |
| Perceived strength of evidence |  | 43.72\*\*\* | 0.43 |  | *-* | - |  | 34.91\*\*\* | 0.38 |
| Strong evidence | 77.2% |  |  | - |  |  | 68.3% |  |  |
| Weak evidence | 48.9% |  |  | - |  |  | 42.2% |  |  |
| No evidence | 21.4% |  |  | - |  |  | 21.2% |  |  |
| Did not know | 53.1% |  |  | - |  |  | 54.9% |  |  |
| Physical restraints |  | 6.91\*\* | 0.17 |  | *-* | - |  | *-* | - |
| No | 60.0% |  |  | - |  |  | - |  |  |
| Yes | 41.3% |  |  | - |  |  | - |  |  |
| Under arrest |  | *-* | - |  | 4.58\* | 0.14 |  | *-* | - |
| No | - |  |  | 78.1% |  |  | - |  |  |
| Yes | - |  |  | 65.6% |  |  | - |  |  |
| Verbally Mirandized |  | *-* | - |  | *-* | - |  | 8.87\* | 0.19 |
| No | - |  |  | - |  |  | 34.0% |  |  |
| Yes | - |  |  | - |  |  | 51.0% |  |  |
| Not sure | - |  |  | - |  |  | 58.6% |  |  |
| *Criminological Factors* |
| Current Charge |  | *-* | *-* |  | 19.23\*\* | 0.3 |  | *-* | *-* |
| Property | *-* |  |  | 78.8% |  |  | *-* |  |  |
| Person | *-* |  |  | 81.1% |  |  | *-* |  |  |
| Drug/weapon | *-* |  |  | 55.0% |  |  | *-* |  |  |
| Administrative | *-* |  |  | 82.8% |  |  | *-* |  |  |
| Other offenses | *-* |  |  | 87.0% |  |  | *-* |  |  |
| Convicted |  | *-* | *-* |  | 7.70\*\* | 0.18 |  | *-* | *-* |
| No | *-* |  |  | 84.0% |  |  | *-* |  |  |
| Yes | *-* |   |   | 66.7% |   |   | *-* |   |   |

*Note.* Only significant (*p* < .05) associations reported. See online supplemental materials for non-significant results.

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001