Abstract

Objective:

This study examined incarcerated persons' self-reported interrogation experiences and confession decision making by investigating which sociodemographic, criminological, and contextual factors were associated with their decisions to deny the allegations, partially admit wrongdoing, or fully confess to the crime.

Hypotheses:

We expected that respondents in this field study would report a wide range of interrogation experiences. Given mixed prior findings we did not formulate hypotheses for sociodemographic and criminological factors, but based on contextual variable research, we predicted that suspects who perceived the evidence against them as strong and who had already decided to confess prior to their interrogation would be more likely to confess.

Method:

Participants were 249 individuals (86% male; M age = 34.8 years; 49% Black, 41% White, 10% other racial identities) incarcerated in local jails in the United States who completed a questionnaire about their most recent interrogation. Respondents described their interrogation experiences (e.g., location, duration, custody), perceptions of police evidence against them, and thoughts about confession prior to the interrogation. We examined group differences according to confession decision and used multinomial logistic regression to examine how sociodemographic, criminological, and contextual factors relate to suspects' self-reported confession decisions.

Results:

Suspects' interrogation experiences varied considerably, as did their perceptions of custody, beliefs about incriminating evidence, and pre-interrogation intent to confess or deny. Sociodemographic characteristics and criminological factors were unrelated to self-reported confession decision making, but several contextual factors predicted confession outcome. Signing away one's Miranda rights and already planning to confess predicted suspects' self-reported confessions, whereas being physically restrained, believing that police had no evidence of one's guilt, and intending in advance to deny the allegations predicted suspects' self-reported denials. Suspects who were undecided about confession prior to interrogation were about as likely to eventually confess as deny.

Conclusions:

Most suspects followed through with their initial intention to confess or deny, and suspects' perceptions about evidence predicted their self-reported confession. These findings complement existing work focused on interrogation techniques and inform both police interrogation training and practice.

Keywords: police interrogation, confession, suspects, jail, custody

Public Significance Statement

Criminal suspects are active decision makers in the interrogation process and their perceptions of the experience relate to their confession decisions. Suspects who thought the police had strong evidence against them were more likely to confess than deny, so it is important that police do not present false evidence. Interrogators should understand that not all suspects intend to deny allegations and that accusatorial approaches could be unnecessary or even harmful to their investigation.

Contextual Factors Predict Self-Reported Confession Decision Making: A Field Study of

Suspects' Actual Police Interrogation Experiences

In many countries, confessions remain the linchpin of criminal investigations and the desired product of police interrogations (Kassin et al., 2010). A large body of work examines the causes and correlates of confessions with an emphasis on police interrogation techniques. Few studies examine the interrogation process, and confession decision making in particular, from the suspect's point of view (Goodman-Delahunty et al., 2014). It is important to understand suspects' confession decision making for several reasons. Research has consistently shown the inculpatory power of confession evidence in the courtroom and beyond (Kassin, 2012). Juries overwhelmingly convict defendants who confessed compared to those who did not (e.g., Jones & Penrod, 2016). Confessions can also have downstream effects on legal actors. A suspect's confession can lead investigators to overlook other evidence or cease to pursue new leads (Kassin, 2012). Confessions can also taint eyewitness testimony and forensic analysis (Hasel & Kassin, 2009; Kassin et al., 2012; Kukucka & Kassin, 2014). In short, confession is likely the most consequential decision a person facing police interrogation could make in that setting.

From a research standpoint, studying suspects' decision making could inform confession diagnosticity. Understanding why suspects decide to confess could help identify differential patterns among true versus false confessions, as innocent and guilty suspects may experience interrogation stressors differently (May et al., 2020; Guyll et al., 2013; Redlich et al., 2011). Whereas prior work on confession diagnosticity focuses on the role of police interrogation techniques in generating true versus false confessions (e.g., Meissner et al., 2014), it is important to consider suspects as active participants in the interrogation interaction. For example, the interrogation decision-making model (Yang et al., 2016) centers suspects as decision-makers

who must process and respond to various compelling internal and external forces during police interrogation. Ultimately, it is the suspect's decision to confess or deny, and attempts to understand how suspects' perceptions, experiences, and vulnerabilities interact in contributing to their confession decision would benefit both research and practice.

Toward that goal, several theoretical models of confession decision making have emerged. Some are rooted in psychoanalysis or cognitive behavioral analysis, while others emphasize the role of police pressure or the dynamic interaction between suspect and interrogator throughout the course of the interrogation (see, generally, Gudjonsson, 2003). The Interaction Process Model of confession posits that confession is a product of individual and crime-related characteristics, contextual characteristics of the interrogation, and police questioning techniques (Moston et al., 1992). A more recent suspect-focused decision making model frames confession decision making as a rational decision process in which suspects continually monitor the expected utility of various choices based on prevailing conditions, subjective evaluations of the experience, and expected utility assessments (Yang et al., 2016). Overall, these theories and the available empirical evidence (described next) suggest that confession decision making is a complex phenomenon dependent upon a number of factors both internal and external to the person being questioned.

Factors Associated with Confession Decision Making

While theoretical models have not been extensively tested, some studies have examined factors associated with suspects' decisions to fully confess or partially admit to criminal involvement. The present research is a field study of actual interrogations and confessions, so we focus our review on field studies examining adult suspects' actual confession decision making. In these studies, researchers often group explanatory variables into categories reflecting 1)

individual, 2) criminological, and 3) contextual factors. Individual factors are typically static, sociodemographic characteristics such as age, race/ethnicity, cognitive ability, marital status, or personality features. Criminological factors include the suspect's legal experience as well as characteristics of the crime under investigation. Examples include offense history, offense type, crime seriousness, victim characteristics, and access to legal advice. Contextual factors examine interpersonal or situational aspects of the actual interrogation, such as interview style, perceived strength of evidence, and pre-interrogation intention to confess. We review the research on these variable categories next, noting that these findings from field studies with adult suspects may or may not hold for different populations (e.g., adolescents, people with mental illness).

Individual or Sociodemographic Factors

The role (if any) of individual factors in confession decision making is unclear, as studies are few and findings are mixed. Some studies found that younger suspects were more likely to confess than older suspects (Gudjonsson & Petursson, 1991; Lippert et al., 2010), though later studies in Canada (Deslauriers-Varin, Lussier, et al., 2011; Snook et al., 2015) and Japan (Wachi et al., 2016a) found no association between age and confessions. In the United Kingdom (UK), older suspects were more likely to respond "relevantly" (i.e., to meaningfully respond to a question) than to say "no comment" to police interviewers' questions (Leahy-Harland & Bull, 2021).

White suspects in an observational study were more likely to confess than Black suspects (Leo, 1996), though other studies found no relation between suspect race/ethnicity and confessions (Deslauriers-Varin, Lussier, et al., 2011; Pearse et al., 1998). Other studies hypothesized that marital status (as a proxy for social capital) is a relevant factor. In one study, among suspects who reported having already decided to confess before the interrogation began,

married offenders were 3.6 times more likely to confess than unmarried offenders (Wachi et al., 2016a), yet marital status was not associated with confession in a study of Canadian prisoners (Deslauriers-Varin, Lussier, et al., 2011). Gender differences are rarely if ever examined, as most suspect samples are largely or entirely male.

Given that interrogations are dynamic interactions and that confession decision making involves a complex array of both explicit and subconscious calculations (Yang et al., 2016), these inconsistencies are not surprising and are likely a function of study location, population, and measurement choices. Although it is important to statistically account for any systematic variation in confession decision making associated with these variables, sociodemographic variables are likely a small part of the constellation of factors that influence confession decision making.

Criminological Factors

There is some evidence that crime characteristics or the suspect's criminal history are more relevant to confession decision making. Suspects with one or more previous convictions are less likely to confess during police questioning (Deslauriers-Varin, Beauregard, et al., 2011; Snook et al., 2015), which researchers attribute to experienced suspects' greater legal sophistication. Wachi and colleagues (2016a) reported that a priori confession decision making moderated the relationship between arrest history and confession; previous arrests were unrelated to confession for offenders who had already decided to confess prior to the interrogation, but among offenders who had planned to deny or were undecided, offenders with no arrest history were more likely to confess. In the UK, suspects of serious crimes who had previous convictions were more likely to respond "relevantly" (i.e., meaningfully) than to say "no comment" (Leahy-Harland & Bull, 2021).

Some researchers posit that crime seriousness and crime type—two conceptually distinct but correlated variables— are related to confession decision making. For example, sex offenders may engage in different decision making calculus because of the inherent seriousness and moral repugnance of sex crimes, the frequent lack of corroborating physical evidence, or their tendency to display cognitive distortions and face aggressive interviewers (Beauregard & Mieczkowski, 2012; Holmberg & Christianson, 2002; Kebbell et al., 2008). Yang and colleagues (2016) argued that serious crimes increase suspects' expected negative utility of distal confession outcomes (e.g., longer prison sentences), disincentivizing them from confessing. There is some support for this proposition (Moston et al., 1992). However, at least one study found that confession likelihood *increased* with crime seriousness (Deslauriers-Varin, Lussier, et al., 2011), though the study's sample comprised convicted people in prison, suggesting an upward bias in crime seriousness. Other studies report no association between crime seriousness and confession in data with incarcerated persons (Snook et al., 2015). In general, most studies assessing suspects' perspectives on interrogation are based on samples of convicted, incarcerated persons, potentially removing much of the variation in crime seriousness and the interrogation techniques likely associated with it. No studies to our knowledge have compared convicted to non-convicted detained persons; in the United States, this would require a sample of individuals in jail or other short-term detention, as jails usually house individuals awaiting adjudication.

Finally, access to counsel is an important predictor of confession decision making. Unsurprisingly, legal advice is associated with decreased likelihood of confessing to a crime (Deslauriers-Varin, Beauregard, et al., 2011; Moston et al., 1992; St-Yves & Deslauriers-Varin, 2009). In one study, the odds of confessing decreased by a factor of four when a legal advisor was present (Pearse et al., 1998). Even merely seeking legal advice is associated with decreased

confession likelihood (Snook et al., 2015). Of course, even though access to legal counsel is constitutionally universally available in the United States, in reality there are myriad psychological, cultural, and logistical barriers to suspects' access to counsel prior to police interrogation (Kalb, 2018; Zimerman & Tyler, 2010).

Situational or Contextual Factors

Situational or contextual factors are those characteristics of the immediate interrogation environment or interaction. The limited available research on suspects' confession decision making suggests that contextual factors are potentially powerful drivers of their decision to confess or deny involvement in a crime. First, the perceived strength of incriminating evidence is highly correlated with confessions. Data from researchers (Cassell & Hayman, 1996), interrogators (Moston et al., 1992), and suspects themselves (Deslauriers-Varin, Lussier, et al., 2011; Snook et al., 2015) show that suspects who are questioned in the face of convincing incriminating evidence are more likely to confess than suspects presented with moderate, weak, or no evidence of their guilt. One study found that strength of evidence moderated confession decision making, as different sociodemographic and criminological factors predicted confession among suspects facing weak evidence compared to suspects facing strong evidence of their guilt (Deslauriers-Varin, Lussier, et al., 2011). Another study reported that suspects who perceived the evidence against them as strong were 3.67 times more likely to fully confess—but only among those who had already decided to confess (Wachi et al., 2016a). Surprisingly, perceived strength of evidence did not relate to confession for suspects who had not decided whether to confess before their interrogation began, perhaps due to the way in which the evidence was presented (Bull, 2014).

This concept of pre-interrogation intent is underexplored but potentially very important for understanding whether and how suspects move from denial to confession (Walsh & Bull, 2012). Emerging work with offender populations contravenes the stereotypical portrayal of suspects as resistant, uncooperative, and quick to deny criminal involvement (Bull, 2019). To the contrary, many suspects retrospectively report having already decided to confess before the interrogation even began. For example, in one study 46% of prisoners reported deciding to confess before interrogation started (Deslauriers-Varin, Beauregard, et al., 2011), and the figure was 64% in another study (Wachi et al., 2016a). Importantly, many suspects adhere to their initial inclination about confessing, while others change their mind during the interrogation (Deslauriers-Varin, Beauregard, et al., 2011). This research is valuable because it demonstrates that suspects are a heterogeneous group; they enter the interrogation environment with a multitude of predispositions and expectations, and the success of particular interrogation strategies—along with suspects' vulnerability to coercion—may differ according to those predispositions and expectations.

Other interrogation context characteristics could also be important determinants of confession decision making but have not yet been extensively studied. For example, interrogation duration, time of day, and the presence of physical restraints could impact perceptions of coercion and voluntariness (Kassin et al., 2007). Leo (1996) reported that the longer interrogations lasted, the more likely they were to yield incriminating information. Kassin and colleagues (2007) asked law enforcement professionals to estimate typical interrogation lengths and times of day but did not associate these variables with confession outcome. Scherr and colleagues (2014) found that time of day did impact confessions when laboratory participants were interviewed during "off peak" hours of alertness, perhaps resulting from

additional cognitive fatigue. Together, these studies raise the possibility that many other context characteristics may impact suspects' decision making by altering their perceptions of custody and/or their ability to withstand interrogative pressures.

In sum, while the predictive value of static factors such as demographic characteristics and criminal history remains unclear, prior research is more convincing about the role of context-specific variables in confessions, particularly suspects' perceptions of evidence and their pre-interrogation decisions. However, more research is needed to examine these factors simultaneously, to test their associations among different populations, and to examine a wider range of contextual factors that suspects experience during police interrogation.

The Present Study and Hypotheses

Theoretical models of confession decision making highlight the role of suspect decision making in the confession outcome, yet few studies have examined suspects' perspectives (Cleary & Bull, 2019). Existing work is limited in several ways. First, most research occurred outside the United States, where legal systems and cultural norms differ. These important works shed light on nation-specific populations and practices in Canada, Australia, and Japan. However, the United States' comparatively high incarceration rate and willingness to legally permit, train, and use aggressive interrogation techniques affirms the importance of studying American suspects' experiences (Cleary & Warner, 2016; Kassin et al., 2010; Redlich et al., 2014). Second, much of the work has been with sex offender populations, for which interrogation/interviewing strategies and confession decision making may differ for several reasons: (a) lack of accompanying physical evidence that often typifies sex crimes; (b) inherent seriousness of sex crimes; or (c) internal feelings of guilt, shame, or humiliation that may differ in both nature and degree for sexual offenders than for other offenders (Beauregard et al., 2010). In fact, confession decision

making patterns vary even within the sex offender population (Beauregard & Mieczkowski, 2012). Third, almost all suspect-focused studies involved convicted people who are incarcerated in prisons. Samples with incarcerated prisoners involve inherent selection bias because those individuals have already been convicted; therefore presumably most (though certainly not all) are actually guilty. Also, with people who are incarcerated in prisons, the time span between the interrogation and study data collection is often many years, raising concerns about memory degradation (May et al., 2020).

The present study expands prior work by examining sociodemographic, criminological, and contextual factors associated with confession among a diverse sample of convicted and non-convicted adults in short-term detention. It assessed a broader array of contextual factors, including where, when, for how long, and under what conditions suspects were interrogated. It also collected information regarding police custody (perceived and actual) and Miranda (i.e., legal rights) experiences. Our goal was to characterize interrogations as suspects actually experience the process, instead of focusing on specific offender populations, interrogation techniques, or false confessions. Our research questions and hypotheses were as follows:

Research question 1: *How do suspects in the U.S. experience police interrogation?* Much of the interrogation literature focuses on police interrogation techniques, yet little of it has been directly informed by data from suspects. Our first descriptive research question focuses on the "targets" of interrogation and aims to describe suspects' interrogation experiences from their point of view. **Hypothesis 1:** We expected that respondents would report a wide range of experiences in terms of custodial setting, interrogation duration, Miranda presentation, and other situation-specific factors.

Research question 2: *In this U.S. detainee sample, which sociodemographic, criminological, and contextual factors are associated with suspects' decision to confess?* Given the generally mixed findings reviewed above, we did not formulate specific hypotheses regarding sociodemographic or criminological factors. **Hypothesis 2:** Regarding contextual factors, based on prior research we hypothesized that suspects who perceived the evidence against them was strong would be more likely to confess than others (Deslauriers-Varin, Lussier, et al., 2011; Snook et al., 2015), as would suspects who had already decided to confess prior to their interrogation (Deslauriers-Varin, Beauregard, et al., 2011). We did not formulate specific hypotheses for the additional contextual factors we examined, given their exploratory nature.

Method

Participants

Participants were 444 people currently incarcerated in one of two jail facilities in the mid-Atlantic region of the U.S. A total of 249 individuals reported being questioned by police in connection with their current charge. This final sample ($N = 249$) was predominantly male (85.9%) with a mean age of 34.8 years ($SD = 11.0$, range = 18-69 years). Individuals self-identified primarily as Black (49.2%) or White (40.7%) with 10.2% identifying as other or multiple racial identities. Current charges included property crimes (21.7%), crimes against persons (14.9%), weapon or drug offenses (33.7%), probation violations or administrative offenses (12.0%), crimes involving fraud or indecency (2.8%), and driving or traffic offenses (6.4%). Participants reported an average of 9.0 lifetime arrests ($SD = 9.4$; median = 6; range: 1-35 after exclusion of outliers). Approximately two-thirds (68.8%) had recently been convicted of the charge for which they were interrogated and one-third (31.2%) were awaiting trial. Of those

convicted who had already been sentenced ($n = 159$), respondents reported being sentenced to serve 5.2 years on average *(SD* = 8.9; range = 2 months–56 years).

[PLEASE INSERT TABLE 1 ABOUT HERE]

Predictor Variables and Outcome Measures

A two-part questionnaire was developed for the purposes of this study. The first section assessed respondents' opinions about different custodial interrogation approaches, consistent with prior studies with suspects from Australia (Kebbell et al., 2010) and Japan (Wachi et al., 2016a; see Cleary & Bull, 2019). The next section addressed research questions associated with respondents' actual custodial interrogation experiences. The questionnaire asked respondents whether they had been custodially questioned in connection with the charge on which they were currently detained. We defined custodial interrogation for respondents via the following statement: "*Custodial interrogation' means that 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.*" Respondents indicated whether they had been custodially interrogated in connection with their current detention, and those responding yes ($N = 249$) completed additional items pertaining to their actual interrogation experience. The questionnaire was designed to be readable at the 7th grade level and was piloted for clarity with 21 detained and non-detained adults. Pilot participants provided qualitative feedback, and the Flesch-Kincaid grade level estimate was 7.1 (Flesch, 1948).

Predictor Variables: Sociodemographic

In the first portion of the questionnaire, respondents provided their age (in years), gender identity (0 = *female* and 1 = *male*), and racial identity (recoded as 0 = *White*, 1 = *Black*, or 2 = *Multiple/other racial identities*).

Predictor Variables: Criminological

Respondents also provided their arrest history (number of lifetime arrests), incarceration history (number of lifetime incarcerations, including current detention), current charge (categorized according to state code as *crimes against persons*, *crimes against property*, *weapon/drug offenses*, *probation violations/administrative offenses*, *fraud/indecency offenses*, or *traffic/driving offenses*), conviction status (0 = *not convicted*, 1 = *convicted*), and if convicted, their sentence (in years and months).

Predictor Variables: Contextual

These items covered a range of context characteristics and were designed to capture interrogation elements often considered in totality of the circumstances evaluations. Variables were presented as ordinal categories or asked as open-ended items and ultimately collapsed into ordinal categories for ease of interpretation. Respondents reported the location where they were interrogated (1 = *on the street*, 2 = *in their home*, 3 = *in a police car*, 4 = *at the police station*, or 5 = *other location*). Twenty respondents indicated being interrogated in multiple locations (e.g., in a police car and again at the police station); in these instances, we used the most restrictive location because perceptions of custody may impact confession decision making. We also assessed the time of day when the interrogation occurred (categorized as 1 = *morning* [6:00am-12:00 noon], 2 = *day* [12:00 noon-6:00pm], 3 = *evening* [6:00pm-12:00 midnight], or 4 = *night* [12:00 midnight-6:00am]). Respondents also estimated how much time had elapsed between detainment and interrogation (categorized as 1 = *less than one hour*, 2 = *one to two hours*, 3 = *three to twenty-three hours*, 4 = *one to six days*, or 5 = *one week or longer*) and the duration of the interrogation (in hours and minutes).

Two Miranda-related items asked whether the respondent was Mirandized ("Did the police read you your rights?" where 0 = *no*, 1 = *yes*, 2 = *not sure*) and whether they were asked to sign a waiver form (0 = *never asked to sign a form*, 1 = *asked but did not sign*, 2 = *asked and signed form*). Two items pertaining to counsel asked whether the respondent consulted a lawyer before questioning or had a lawyer present during questioning (0 = *no*, 1 = *yes*). Four items were designed to capture perceptions of custody: the use of physical restraints such as handcuffs or leg shackles (0 = *no*, 1 = *yes*), the use of electronic recording (0 = *not recorded,* 1 = *audio recorded*, 2 = *video recorded*, or 3 = *unknown*), arrest status (0 = *not under arrest*, 1 = *under arrest*, or 2 = *don't know*), and perceptions of custody, operationalized as whether the respondent felt like they could "walk away at any point" while being questioned ("free to leave," 1 = *yes* or 0 = *no*). Next, respondents rated the degree of incriminating evidence they felt police had against them (1 = *strong evidence*, 2 = *weak evidence,* 3 = *no evidence*, 4 = *did not know*). Finally, consistent with prior confession decision making studies (Deslauriers-Varin, Beauregard, et al., 2011; Wachi et al., 2016a), respondents indicated their pre-interrogation confession intent (1 = *intended to confess*, 2 = *intended to deny*, 3 = *undecided*). Importantly, we did not ask respondents to disclose whether they were actually guilty of the crime in question for legal and ethical reasons.

Outcome Variable: Confession

Some prior studies measured self-reported confession decision making in a binary fashion (i.e., confessed/did not confess; Deslauriers-Varin, Beauregard, et al., 2011), while others conceptualized it as a matter of degree (e.g., 5-point Likert scale from *not at all* to *fully*; Wachi et al., 2016a, 2016b). We utilized a trichotomous measurement for the outcome variable, similar to Wachi et al. (2014). Participants self-reported whether they *denied everything* (0 = denial); *confessed to parts, but not everything* (1 = partial admission); or *confessed to everything*

(2 = full confession). This approach approximates the reality that all interrogations do not "cleanly" conclude in a full confession or complete denial and captures enough variation in confession outcome without overly segmenting degrees of confession.

Procedure

We obtained study approval from Virginia Commonwealth University's institutional review board (HM20003396) and the jail superintendents. We visited two jail facilities: a city jail (2 housing units) and a large regional jail serving several surrounding cities and counties (18 housing units). Housing unit size ranged from smaller, open-style pods accommodating up to 18 inmates to much larger, traditional cellblock units containing approximately 46 double-bunked cells that accommodated up to 92 inmates. Upon visiting each pod, the first author introduced the research objectives and procedures, with an emphasis on voluntariness and confidentiality. Interested participants were provided a consent form and copy of the questionnaire and encouraged to ask questions. Waiver of documentation of consent had been secured from the IRB in order to further protect participants' confidentiality. Participants completed the questionnaire individually either in the common areas or in their cells, as they chose. Upon completion, each respondent deposited their anonymous completed survey in a collection box and was thanked for participating. Response rates were computed for each housing unit and ranged from 11% (2/18) to 94% (17/18); the overall response rate was 40.7%.

Results

We first present descriptive data on respondents' interrogation experiences. We then present group comparisons among the three confession decision groups (full confession, partial admission, denial) according to sociodemographic factors, criminological factors, and contextual factors related to the interrogation. Because most of the study variables are discrete, we

examined cross-tabular relationships between the individual, criminological, and contextual factors and respondents' ultimate confession decision as initial measures of association. Findings from these bivariate analyses were used to inform the multivariate model specifications. Finally, we used multinomial logistic regression to predict confession decision as a function of these classes of variables. Logistic regression is a flexible, powerful analysis that can accommodate both discrete and continuous independent variables and does not require predictors to be linearly related to the outcome variable nor to be normally distributed (Tabachnick & Fidell, 2019). In the present study, we modeled confession and partial admission and used denial as the reference category. We screened the data for univariate outliers, and all variables had fewer than 4.8% missing values. Finally, we conducted sensitivity analyses to test the robustness of the multinomial models.

Interrogation Experiences

The majority of respondents (73%) reported they were questioned immediately or shortly after they were detained in connection with a crime. Only 13% of respondents reported being interrogated more than a day after they were detained. Most interrogations occurred in a custodial setting such as a police station (49%) or police vehicle (11%). About twenty percent of respondents reported being questioned at the scene of the incident. Interrogations occurred at all hours of the day and lasted, on average, 1.49 hours ($SD = 1.84$), though duration varied widely from 5 minutes to 12 hours. Nearly half the interrogations (45%) lasted less than one hour, 41% lasted 1-2 hours, and 10% lasted more than two hours (Table 2).

About as many respondents reported that they were presented verbal Miranda warnings as were not verbally Mirandized. Notably, nearly 11% of respondents were not sure whether police Mirandized them. More than 80% of respondents indicated they were not presented with a

written Miranda waiver form prior to questioning. Respondents' experiences with physical police custody (perceived or actual) also varied considerably. More than half reported they were under arrest at the time of questioning. Nearly a third indicated they were not under arrest but acquiesced to questioning nonetheless. Notably, 12% of respondents did not know whether they were under arrest. When asked about whether they felt free to leave (regardless of official arrest status), most respondents (88%) said no. About three-quarters reported being physically restrained in handcuffs or leg shackles, which could impact perceptions of custody. Almost no respondents consulted an attorney prior to their interrogation or had an attorney present during questioning. A quarter (26%) of interrogations were reportedly audio- or video-recorded, while the remainder were not recorded (39%) or unknown (35%).

Respondents differed in their pre-interrogation decision making regarding confession. A quarter of respondents indicated they entered the interrogation having already decided to confess. Nearly four in ten respondents (39%) reported intending to deny the allegations. Importantly, more than a third of the sample (36%) reported being undecided about whether to confess or deny the allegations during interrogation. This may relate to suspects' perceptions about the strength of incriminating evidence in police possession. Almost 44% of respondents thought that police had some form of evidence of their guilt. About a third of respondents reported that police had no incriminating evidence against them. Finally, 22% of respondents reported not knowing whether police had evidence of their guilt.

[PLEASE INSERT TABLE 2 ABOUT HERE]

Confession Group Differences across Sociodemographic, Criminological, and Contextual Factors

Twelve respondents did not answer the confession item; of the 237 respondents for which outcome data were available, 53 reported fully confessing to the crime (22%), 58 provided partial admissions of guilt (25%), and 126 denied all allegations (53%). Consistent with prior work on self-reported confessions (Deslauriers-Varin, Lussier, et al., 2011), variables were categorized as sociodemographic factors, criminological factors, and contextual factors. Among sociodemographic factors, the confession groups significantly differed according to gender and racial identity but not according to age (Table 3). Specifically, among female detainees ($n = 31$), 42% fully confessed, 23% partially admitted guilt, and 36% denied, whereas among male detainees ($n = 205$), 20% fully confessed, 25% partially admitted guilt, and 56% denied. Among Black respondents ($n = 116$), 13% fully confessed, 23% partially admitted guilt, and 64% denied; among White respondents ($n = 96$) 34% fully confessed, 27% partially admitted guilt, and 39% denied. Table 3 displays individual characteristics according to confession decision.

[PLEASE INSERT TABLE 3 ABOUT HERE]

There were no significant differences across confession groups for any of the criminological factors. By contrast, confession groups significantly differed on four contextual factors: written Miranda waiver, physical restraints, perceived strength of evidence, and pre-interrogation confession intent (Table 3). Regarding written Miranda waiver, the majority of suspects who were not presented with a Miranda waiver form, as well as suspects who were given a form but refused to sign it, were more likely to deny allegations (56% and 69%, respectively) than to confess. However, suspects who formally waived their Miranda rights in writing were approximately equally distributed across the three confession groups. Suspects who were handcuffed or otherwise physically restrained were more likely to deny than to partially

admit guilt or fully confess, whereas suspects who were not restrained were more likely to partially admit guilt or fully confess than deny.

For perceived strength of evidence, nearly half (47%) of respondents who believed police had strong evidence against them fully confessed, while nearly four-fifths (77%) of respondents who believed police had no incriminating evidence denied the allegations. Notably, about half of suspects who did not know how much incriminating evidence police had against them ultimately confessed (partially or fully).

The groups also differed significantly according to confession intent; 85% of suspects who had decided beforehand to deny the allegations ultimately did deny, whereas 57% who had already decided to confess ended up confessing. Among those who were undecided prior to interrogation ($n = 80$), 40% ultimately provided some incriminating information and only 15% fully confessed.

Factors Associated with Confession

Next we conducted a sequential multinomial logistic regression to predict confession decision, measured as a trichotomous outcome, as a function of sociodemographic, and then contextual, factors. The goal was to assess the role of contextual factors in confession decision making after accounting for individual characteristics. Criminological factors showed no bivariate associations with confession outcome and thus were not entered enter the models. Prior to modeling, contingency tables for discrete variables were evaluated to ensure that expected frequencies > 1, and only one cell displayed an expected frequency < 5, indicating adequate power for goodness-of-fit tests. Tolerance statistics for all predictor variables ranged from .806 to .958 and variance inflation factor (VIF) estimates ranged from 1.043 to 1.162, indicating no multicollinearity concerns. The first (baseline) model included the following sociodemographic

variables: gender (*male* = 1 with *female* as reference category), racial identity (dummy variables for *Black* and *Other/multiple races* with *White* as reference category), and age (continuous).

In the second (full) model, selected contextual factors were added to assess their predictive value after accounting for demographic differences. Though the study questionnaire was designed to measure a wide range of contextual variables in order to comprehensively describe suspects' interrogation experiences (Table 2), not all contextual variables were designed to predict confession outcome. To decide which contextual factors to include in the full model— and guided by principles of model parsimony—we considered each contextual variable's degree of variation, bivariate association with the confession outcome variable, potential for interaction effects, and theoretical importance. Ultimately, the full model included seven contextual factors: interrogation location, perceptions of custody, interrogation duration, written Miranda waiver, physical restraints, perceived strength of evidence, and pre-interrogation confession intent.

Several contextual factors' values were collapsed for parsimony prior to modeling. Interrogation location was dichotomized as 1 = *police station* and 0 = *any other location* because approximately half of respondents were interrogated at a police station and it is (arguably) the most restrictive and potentially coercive setting. Arrest status was dichotomized as 1 = *under arrest* and 0 = *not under arrest* or *not sure*. Written Miranda waiver was dichotomized as 1 = *signed a written Miranda waiver* and 0 = *did not sign*. Given their potential theoretical value, perceived strength of evidence and pre-interrogation confession intent were not collapsed and all categories were retained in the models.

The baseline model was significant (Table 4). Classification of cases on the basis of demographic variables alone was adequate at 54.8% overall. The baseline model classified deniers exceptionally well (94.2%) but full confessors poorly (23.1%) and partial confessors not

at all (0.0%). With regard to individual characteristics, only racial identity significantly predicted full confession compared to denial. Compared to White suspects, Black suspects were significantly less likely to fully confess than to deny.

[PLEASE INSERT TABLE 4 ABOUT HERE]

The full model showed excellent fit to the data, including a marked improvement in pseudo-R^2 (Nagelkerke R^2 = .60; Table 4). Classification also improved with the addition of contextual factors. Overall, the full model correctly classified 69.8% of cases (82.2% of deniers, 50.9% of partial confessors, and 65.1% of full confessors). We first compared partial admissions to denial (the reference category). Several significant associations emerged. First, suspects who were physically restrained during interrogation (e.g., in handcuffs or leg shackles) were more likely to deny than to provide incriminating information relative to suspects who were not in restraints. Second, suspects who believed the police had no evidence against them were more likely to deny than to provide self-incriminating information. That is, for suspects who believed the police had no evidence against them (relative to suspects who did not know), the odds of denying the allegations were about five times higher than providing partially incriminating information.

Suspects' pre-interrogation confession intent was also significantly associated with self-reported partial admissions of guilt. "Undecided" was the reference group for this variable. Suspects who had already decided to confess before the interrogation began were more likely to provide partial admissions of guilt than to deny (Table 4). Similarly, suspects who intended to deny the allegations were less likely to partially admit guilt than to actually deny. In other words, suspects who entered the interrogation planning to confess or deny were each about six times

more likely to report actually following through with their planned outcome compared to suspects had not decided what to do.

A similar pattern emerged when comparing full confessions to denials. Suspects who believed the police had no evidence against them were significantly less likely to self-report fully confessing than to deny (Table 4). Notably, suspects who believed the police had some degree of evidence against them (whether weak or strong) were not more likely to confess than deny. Regarding pre-interrogation confession intent, suspects who had already decided to confess were far more likely to self-report ultimately confessing than denying. Prior intent to deny did not significantly relate to ultimate confession versus denial. Finally, a significant effect of Miranda waiver emerged. Suspects who signed a written Miranda waiver were more than five times more likely to fully confess than to deny the allegations (Table 4).

As a final step, we conducted sensitivity analyses to examine the classification ability of our multinomial models. Sensitivity analyses with categorical outcomes are complex. We used the caret package in R (caret stands for Classification And REgression Training) to perform a k-fold cross validation, with k = 10. We divided the data into test and train data sets, with 75% of the data being used in the training data set. The caret package attempts to ensure a similar distribution of the supplied outcome variable in both datasets. After splitting the data, we trained our model using a simple main effects model. The k-fold cross validation resulted in an accuracy of 0.632 with an accuracy standard deviation of 0.111. Additionally, the k-fold cross validation resulted in a kappa of 0.394 with a standard deviation of kappa of 0.175. We then applied the training model resulting from the k-fold cross validation to the test data set and compared actual to predicted results. The overall accuracy for predicted versus actual was 68.75% [95% CI 53.75%, 81.34%] and the kappa statistic was 0.473. McNemar's test on the table yielded $p =$

0.60, indicating that there is no statistically significant difference between the marginal counts/probabilities. When examining the results by class, the model is very good in predicting true deniers as deniers (sensitivity 0.840) while less able to predict partial and full confessors (sensitivity 0.539 and 0.500 respectively). The model does an excellent job in predicting true non-confessors (specificity 0.829 for partial confessors and 0.947 for full confessors). Additional summary statistics for the predictive ability of the model are presented in Table 5.

[PLEASE INSERT TABLE 5 ABOUT HERE]

In summary, the k-fold cross validation, with k = 10, appears to validate the results of the model and indicates a fairly robust model.

Discussion

This field study with persons detained in American jails described the self-reported interrogation experiences of suspects in actual interrogations. We found that suspects' interrogation experiences varied considerably in terms of location, duration, Miranda presentation, and other context characteristics. Suspects' perceptions of their interrogations also varied, including their understanding of custody, their beliefs about how much incriminating evidence police possessed, and their initial intent to confess or deny the allegations. Sociodemographic characteristics and criminological factors were unrelated to self-reported confession decision making in the present study. By contrast, being physically restrained, believing that police had no evidence of one's guilt (compared to being uncertain about what evidence police had), and intending in advance to deny the allegations (compared to being undecided) predicted suspects' self-reported denials. Signing away one's Miranda rights and already planning to confess were associated with suspects' self-reported confession.

How Do suspects in the U.S. Experience Police Interrogation?

Stereotypical media portrayals and laboratory simulations of interrogations typically model custodial interrogations as tense, sustained interactions between one suspect and one interviewer in a dedicated interrogation room. While this type of interaction is common, suspects are also likely to be custodially questioned on the street, in their home, or in a police car. They may be questioned in the middle of the night, while handcuffed, only very briefly, or without being Mirandized. In short, from a suspect's perspective, custodial interrogation—that is, questioning in which people feel they are not free to leave—can happen anywhere at any time, without an attorney.

Several aspects of suspects' interrogation experiences reveal important implications for Miranda custody analyses and the importance of procedural protections. We found that regardless of arrest status, nearly 90% of our sample did not feel free to leave. These findings align with lab studies showing that being questioned by police in any form—even witnesses questioned in a non-accusatory manner—triggers perceptions of custody (Alceste et al., 2018). Moreover, a nontrivial minority of respondents reported some degree of confusion about what was happening to them. More than one in ten respondents who submitted to custodial questioning were not sure whether police Mirandized them, and 12% did not know whether they were under arrest at the time of questioning. The driving force(s) behind their uncertainty are unknown. For example, they could have been experiencing situational interferences with memory or information processing due to stress or intoxication, or they could have a cognitive disability. They may not understand what precisely constitutes arrest. Regardless of the underlying source of their confusion, these suspects' lack of clear understanding about whether they were properly Mirandized or whether they were even under arrest raise concerns about heightened vulnerabilities during custodial questioning.

Which Sociodemographic, Criminological, and Contextual Factors are Associated with Suspects' Decision to Confess?

Full confessors, partial confessors, and deniers in this study differed in important ways. When viewed in a bivariate fashion, gender and racial identity seem to matter; more than half of men denied the allegations, and women fully confessed more often than they partially admitted or denied. Miranda waiver, use of physical restraints, and suspects' perceptions of the evidence and pre-interrogation intent also discriminated the three confession outcomes. However, when we examined individual and contextual variables simultaneously, demographic predictors receded and factors associated with the interrogation interaction and participants came into focus.

Several specific contextual variables emerged as predictors of self-reported confession decision making. Signing a written Miranda waiver was associated with greater likelihood of self-reported full confession. It is possible that suspects who agree to waive Miranda are already more inclined toward cooperation and confession. This can be difficult to disentangle given that Miranda waiver rates are generally high among suspects of all ages across a variety of settings (Kassin et al., 2019). This finding could also be a product of omitted variable bias. Because this study was conducted in a jail setting, we expected the majority of respondents to be awaiting adjudication. For privacy and harm reduction purposes, we did not ask individuals to disclose whether they were actually guilty of the crime for which they were interrogated. It is possible that guilty individuals anticipated a negative outcome, which could influence their decisions to both sign a Miranda waiver and confess to the crime.

Suspects who were physically restrained during their interrogation were more likely to report denying allegations than to provide incriminating information, relative to suspects who

were not in restraints. We interpret this finding through a procedural justice lens. Aside from the physical discomfort and literal restriction of movement, physical restraints could engender perceptions of psychological or physical danger, trigger a trauma response, reinforce the status differential between interrogator and suspect, or activate stereotype threat (i.e., fear of unfair treatment because of cultural stereotypes depicting Black people as criminals; Najdowski et al., 2015). Suspects have demonstrated an aversion to dominance or control-oriented interrogation strategies (Cleary & Bull, 2019) and a clear preference for rapport-based, respectful, and humane interviewing styles (Holmberg & Christianson, 2002; Kebbell et al., 2010; Wachi et al., 2016b). Thus, our data suggest that removing handcuffs or leg shackles when feasible could be one simple but effective strategy to promote suspect cooperation and information disclosure.

Consistent with studies from other countries using prison-based samples (Deslauriers-Varin, Lussier, et al., 2011; Snook et al., 2015), we found that suspects' perceptions of incriminating evidence were strongly associated with their interrogation decision making. Group comparisons revealed that among respondents who believed police had strong evidence against them, nearly half reported fully confessing. Notably, respondents who believed the police had no incriminating evidence against them were more likely to actively deny compared to respondents who reported uncertainty about what exactly police had in their possession. One way to create uncertainty is to lie or bluff about evidence. Laboratory studies have long shown that confronting suspects with (real or fabricated) incriminating evidence is an effective interrogation technique for generating confessions (Meissner et al., 2014). Our self-report data show that suspects' own perceptions of the evidence are a key component of confession decision making. This means the notion of whether that evidence is factually true or false becomes central. If a suspect knows they are actually guilty and police present them with real evidence of their guilt, then the suspect's

voluntary confession may be considered an appropriate outcome. However, this study's self-report data align with laboratory and archival data showing the dangers of police deception, including the "bluff tactic" and false evidence ploys (Perillo & Kassin, 2011; Drizin & Leo, 2004). While this study could not determine whether police presented true or false evidence to suspects, it demonstrates that suspects' perceptions of evidence are important to confession decision making. This is likely one reason why numerous countries have already banned the false evidence ploy in criminal interrogations; it is a known risk factor for false confessions (Kassin et al., 2010). False evidence ploys can also backfire with guilty suspects; if the suspect being interrogated is the true perpetrator, they may recognize the purported "evidence" as false and realize the interviewer does not have any actual evidence of their guilt.

Finally, this study suggests that suspects' pre-interrogation intent to confess or deny is an important component of their eventual confession decision. To the extent that respondents accurately recalled and reported their intent, this is meaningful for several reasons. First, it challenges the stereotype of the resistant, uncooperative criminal suspect. Certainly, some suspects (both guilty and innocent) adopt this posture. However, some suspects are prepared to readily confess (Kebbell et al., 2006), and interrogators should be aware that accusatorial or psychologically manipulative strategies may not be necessary and could potentially even hinder their desired outcomes (Holmberg & Christianson, 2002). Wachi and colleagues (2016a) recommended that investigators approach these suspects more like witnesses, taking care to avoid suggestion and any techniques that could interfere with memory retrieval when questioning suspects who are ready to confess. Second, accusatorial interrogations may be fruitless and possibly counterproductive for suspects who have already made up their mind one way or the other. Interrogation strategies are predicated on the notion that police can persuade

reticent suspects to shift away from denial and toward confession (Inbau et al., 2013), and interrogators are trained on these strategies (Cleary & Warner, 2016). But the vast majority of suspects in this sample who had made up their mind beforehand reported ultimately following through with that decision—85% who intended to deny indicated they did deny, and 86% who intended to confess actually did so, either partially or fully. This may also explain the finding that interrogation duration did not relate to confession outcome in this jail sample. Thus, intense, accusatorial interrogations may not be "worth it" for suspects who have made up their minds and are "sticking to their guns" (Bull, 2014), particularly in light of the well-documented risk of false confession associated with common accusatory interrogation techniques (e.g., expressing certainty in suspects' guilt; interrupting their denials; accusing them of lying; Kassin et al., 2010). Indeed, the few available studies of real life interviews with suspects in which some suspects "shifted" from denying towards confessing have found that the associated interviewers' skills were consistent with the non-accusatory PEACE method of investigative interviewing (i.e., open questions, gradual disclosure of evidence, emphasizing contradictions, active listening; Bull & Soukara, 2010; Walsh & Bull, 2015). In 2016 this approach was recommended to the United Nations by one of its Special Rapporteurs (Bull, 2019) and resulted in a recent United Nations Steering Committee recommendation, Principles of Effective Interviewing, co-chaired by the Special Rapporteur (Mendez et al., 2021).

For the one-third of suspects in our sample who had not decided beforehand whether to confess or deny, we did not observe a clear shift toward confession; slightly less than half (45%) reported they ultimately denied and slightly more than half (55%) partially or fully incriminated themselves. Some argue that rapport-building strategies facilitate suspect engagement, which in turn facilitates confessions (Kelly et al., 2019) and recent work shows that demonstrating

empathy is associated with suspects' disclosure of relevant information (Baker-Eck et al., 2021).

Overall, the present findings suggest that what occurs during the interrogation interaction is especially critical for undecided suspects and that this group represents a clear opportunity to apply ethical, non-accusatorial techniques that have shown to be effective (Meissner et al., 2014) and that suspects prefer (Cleary & Bull, 2019; Kebbell et al., 2010).

Limitations and Future Directions

Several limitations of this study should be noted. While we feel it is very important to examine real people's experiences with actual police interrogations, our sample was a convenience sample whose experiences may differ from those in different locations/countries or in different demographic groups. There could be factors associated with the local law enforcement context, such as departmental interrogation policies or detectives' training experiences, that do not generalize to other locales. Second, the variables assessable via survey methods are limited. Interrogations are dynamic and context-specific interactions, as demonstrated by observational studies that have attempted to quantify patterns of common interrogation participants and procedures (Kelly et al., 2016; Soukara et al., 2009). Questionnaires cannot tap into in vivo interrogation decision making, nor can they assess internal traits or states such as impulse control, ego depletion, or affect regulation that likely operate in the confession decision making process (Davis & Leo, 2012). Third, there could be problems associated with self-report of respondents' interrogation experiences. Social desirability, memory decay, and recency effects are common concerns when people self-report stressful past experiences. Some participants could have inaccurately recalled or reported their intentions or perceptions at the time they were questioned.

Also, as this study focused on suspects' perspectives, we did not model interrogation techniques, and both accusatorial and information gathering techniques are known to affect confession rates (Meissner et al., 2014). The present study also did not measure suspects' perceptions of psychological coercion, which are likely key components of their decision making. Finally, for privacy purposes given their pending adjudication, we did not ask respondents to report whether they were actually guilty; doing so would have increased the risk profile of the study. Suspects' actual guilt or innocence almost certainly plays a role in whether or when they confess or provide any incriminating information (May et al., 2020). Studies with convicted persons are able to ask about actual guilt without placing respondents in legal jeopardy, though as noted above, there are tradeoffs in terms of memory recall and selection bias in guilt status. While this study could not assess the role of actual guilt in confession decision making, it complements prior work on interrogation decision making with incarcerated populations.

Future research could address these limitations and build on this study's findings in several ways. First, researchers may consider replicating this work in special populations (e.g., adolescents; people with mental illness; jurisdictions of varying size, location, or policies and practices). It is particularly important to understand how youth, people with mental illness, and other vulnerable populations experience police interrogation and whether the same or different factors predict their decision making. Additionally, given that context factors appear integral to decision making, future suspect-focused surveys could expand the variables tested to include, for example, interrogation techniques or evidence disclosure strategies that have proven decisive in the lab (Meissner et al., 2014; Sandham et al., in press). Finally, suspect-focused studies using different research methods (e.g., in-depth interviews) could better unpack respondents' thoughts

and feelings about their interrogation experience and confession decision, which can both answer and generate important questions for future work in this area.

Conclusions

The present study emphasizes that suspects are active decision makers in the interrogation interaction (Yang et al., 2016) and that understanding confession decision making from suspects' perspectives is an essential complement to work focused solely on interrogation techniques. Most suspects followed through with their initial intention to confess or deny, potentially rendering certain interrogation techniques counterproductive with suspects who are ready to confess and ineffectual for suspects who are committed to denial. Suspects' beliefs about police evidence appear critical to confession decision making. Interrogators who present suspects with rigorously investigated, carefully vetted, and compelling evidence may be more likely to obtain a true confession that adds evidentiary value to their case, whereas interrogators who confront suspects with contrived "incriminating evidence" may ultimately undermine their own efforts.

References

Alceste, F., Luke, T. J., & Kassin, S. M. (2018). Holding yourself captive: Perceptions of custody during interviews and interrogations. *Journal of Applied Research in Memory and Cognition*, *7*(3), 387–397. https://doi.org/10.1016/j.jarmac.2018.03.001

Baker-Eck, B., Bull, R., & Walsh, D. (2021). Investigative empathy: Five types of cognitive empathy in a field study of investigative interviews with suspects of sexual offences. *Investigative Interviewing: Research and Practice, 11,* 28-38

Beauregard, E., Deslauriers-Varin, N., & St-Yves, M. (2010). Interactions between factors related to the decision of sex offenders to confess during police interrogation: A classification-tree approach. *Sexual Abuse: A Journal of Research and Treatment*, *22*(3), 343–367. https://doi.org/10.1177/1079063210370707

Beauregard, E., & Mieczkowski, T. (2012). From police interrogation to prison: Which sex offender characteristics predict confession? *Police Quarterly*, *15*(2), 197–214.

Bull, R., & Soukara, S. (2010). Four studies of what really happens in police interviews. In G. D. Lassiter & C. A. Meissner (Eds.), *Police interrogations and false confessions: Current research, practice, and policy recommendations* (pp. 81–95). Washington, DC: American Psychological Association.

Bull, R. (2014). When in interviews to disclose information to suspects and to challenge them? In *Investigative interviewing* (pp. 167-181). New York: Springer.

Bull, R. (2019). Roar or 'PEACE': Is it a 'tall story'? In R. Bull & I. Blandon-Gitlin (Eds.), *The Routledge International Handbook of Legal and Investigative Psychology*. London: Routledge.

Cassell, P. G., & Hayman, B. S. (1996). Police interrogation in the 1990s: An empirical study of the effects of Miranda. *UCLA Law Review*, *43*, 839–931.

Cleary, H. M. D., & Warner, T. C. (2016). Police training in interviewing and interrogation methods: A comparison of techniques used with adult and juvenile suspects. *Law and Human Behavior*, *40*(3), 270–284. https://doi.org/10.1037/lhb0000175

Cleary, H. M. D., & Bull, R. (2019). Jail inmates' perspectives on police interrogation. *Psychology, Crime & Law*, *25*(2), 157–170. https://doi.org/10.1080/1068316X.2018.1503667

Davis, D., & Leo, R. A. (2012). Interrogation-related regulatory decline: Ego depletion, failures of self-regulation, and the decision to confess. *Psychology Public Policy and Law*, *18*(4), 673–704. https://doi.org/10.1037/a0027367

Deslauriers-Varin, N., Beauregard, E., & Wong, J. (2011). Changing their mind about confessing to police: The role of contextual factors in crime confession. *Police Quarterly*, *14*(1), 5–24. https://doi.org/10.1177/1098611110392721

Deslauriers-Varin, N., Lussier, P., & St-Yves, M. (2011). Confessing their crime: Factors influencing the offender's decision to confess to the police. *Justice Quarterly*, *28*(1), 113–145. https://doi.org/10.1080/07418820903218966

Drizin, S. A., & Leo, R. A. (2004). The problem of false confessions in the post-DNA world. *North Carolina Law Review*, *82*, 891–1007.

Flesch, R. (1948). A new readability yardstick. *Journal of Applied Psychology, 32*, 221–233.

Goodman-Delahunty, J., Martschuk, N., & Dhami, M. K. (2014). Interviewing high value detainees: Securing cooperation and disclosures. *Applied Cognitive Psychology*, *28*(6), 883–897. https://doi.org/10.1002/acp.3087

Gudjonsson, G. H. (2003). *The psychology of interrogations and confessions: A handbook*. Wiley.

Gudjonsson, G. H., & Petursson, H. (1991). Custodial interrogation: Why do suspects confess and how does it relate to their crime, attitude and personality? *Personality and Individual Differences*, *12*(3), 295–306. https://doi.org/10.1016/0191-8869(91)90116-S

Guyll, M., Madon, S., Yang, Y., Lannin, D. G., Scherr, K., & Greathouse, S. (2013). Innocence and resisting confession during interrogation: Effects on physiologic activity. *Law and Human Behavior, 37*(5), 366–375. https://doi.org/10.1037/lhb0000044

Hasel, L. E., & Kassin, S. M. (2009). On the presumption of evidentiary independence: Can confessions corrupt eyewitness identifications? *Psychological Science*, *20*(1), 122–126. https://doi.org/10.1111/j.1467-9280.2008.02262.x

Holmberg, U., & Christianson, S. A. (2002). Murderers' and sexual offenders' experiences of police interviews and their inclination to admit or deny crimes. *Behavioral Sciences & the Law*, *20*(1–2), 31–45. https://doi.org/10.1002/bsl.470

Inbau, F. E., Reid, J. E., Buckley, J. P., & Jayne, B. C. (2013). *Criminal interrogation and confessions* (5th ed.). Burlington, MA: Jones & Bartlett Learning.

Jones, A. M., & Penrod, S. (2016). Can expert testimony sensitize jurors to coercive interrogation tactics? *Journal of Forensic Psychology Practice, 16,* 393–409. http://dx.doi.org/10.1080/15228932.2016.1232029

Kalb, J. (2018). Gideon incarcerated: Access to counsel in pretrial detention. *UC Irvine Law Review, 9*(1), 101-140.

Kassin, S. M. (2012). Why confessions trump innocence. *American Psychologist*, *67*(6), 431–445. https://doi.org/10.1037/a0028212

Kassin, S. M., Bogart, D., & Kerner, J. (2012). Confessions that corrupt: Evidence from the

    DNA exoneration case files. *Psychological Science*, *23*(1), 41–45.

    https://doi.org/10.1177/0956797611422918

Kassin, S. M., Drizin, S. A., Grisso, T., Gudjonsson, G. H., Leo, R. A., & Redlich, A. D. (2010).

    Police-induced confessions: Risk factors and recommendations. *Law and Human*

    Behavior, *34*(1), 3–38. https://doi.org/10.1007/s10979-009-9188-6

Kassin, S. M., Leo, R. A., Meissner, C. A., Richman, K. D., Colwell, L. H., Leach, A. M., & La

    Fon, D. (2007). Police interviewing and interrogation: A self-report survey of police

    practices and beliefs. *Law and Human Behavior, 31,* 381–400.

    http://dx.doi.org/10.1007/s10979-006- 9073-5

Kassin, S. M., Scherr, K. C., & Alceste, F. (2019). The right to remain silent: Realities and

    illusions. In R. Bull & I. Blandon-Gitlin (Eds.), *Routledge international handbook of*

    legal and investigative psychology (pp. 2–19). London: Routledge.

Kebbell, M., Alison, L., & Hurren, E. (2008). Sex offenders' perceptions of the effectiveness and

    fairness of humanity, dominance, and displaying an understanding of cognitive

    distortions in police interviews: A vignette study. *Psychology, Crime, and Law*, *14*(5),

    435–449. https://doi.org/10.1080/10683160801950523

Kebbell, M., Alison, L., Hurren, E., & Mazerolle, P. (2010). How do sex offenders think the

    police should interview to elicit confessions from sex offenders? *Psychology, Crime, and*

    Law, *16*(7), 567–584. https://doi.org/10.1080/10683160902971055

Kebbell, M., Hurren, E., & Mazerolle, P. (2006). *An investigation into the effective and ethical*

    interviewing of suspected sex offenders. Final report to the Australian Criminology

    Research Council.

Kelly, C. E., Miller, J. C., & Redlich, A. D. (2016). The dynamic nature of interrogation. *Law and Human Behavior*, *40*(3), 295–309. https://doi.org/10.1037/lhb0000172

Kelly, C. E., Russano, M. B., Miller, J. C., & Redlich, A. D. (2019). On the road (to admission): Engaging suspects with minimization. *Psychology, Public Policy, and Law*, *25*(3), 166–180. https://doi.org/10.1037/law0000199

Kukucka, J., & Kassin, S. M. (2014). Do confessions taint perceptions of handwriting evidence? An empirical test of the forensic confirmation bias. *Law and Human Behavior*, *38*(3), 256–270. https://doi.org/10.1037/lhb0000066

Leahy-Harland, S., & Bull, R. (2021) The impact of context on real-life serious crime interviews. *Police Practice and Research, 22*(1), 1009-1026, DOI: 10.1080/15614263.2020.1848565

Leo, R. A. (1996). Inside the interrogation room. *Journal of Criminal Law & Criminology*, *86*(2), 266–303.

Lippert, T., Cross, T. P., Jones, L., & Walsh, W. (2010). Suspect confession of child sexual abuse to investigators. *Child Maltreatment*, *15*(2), 161–170. https://doi.org/10.1177/1077559509360251

May, L., Gewehr, E., Zimmermann, J., Raible, Y., & Volbert, R. (2020). How guilty and innocent suspects perceive the police and themselves: Suspect interviews in Germany. *Legal and Criminological Psychology*. https://doi.org/10.1111/lcrp.12184

Meissner, C. A., Redlich, A. D., Michael, S. W., Evans, J. R., Camilletti, C. R., Bhatt, S., & Brandon, S. (2014). Accusatorial and information-gathering interrogation methods and their effects on true and false confessions: A meta-analytic review. *Journal of Experimental Criminology*, *10*(4), 459–486. https://doi.org/10.1007/s11292-014-9207-6

Mendez, J. E., Thomson, M., Bull, R., Fallon, M., ….Tait, S. (2021). *Principles on effective interviewing for investigations and information gathering.* Special report of the United Nations Rapporteur. Available at: https://www.wcl.american.edu/impact/initiatives-programs/center/publications/documents/principles-on-effective-interviewing/

Moston, S., Stephenson, G. M., & Williamson, T. M. (1992). The effects of case characteristics on suspect behaviour during police questioning. *The British Journal of Criminology*, *32*(1), 23–40. https://doi.org/10.1093/oxfordjournals.bjc.a048178

Najdowski, C. J., Bottoms, B. L., & Goff, P. A. (2015). Stereotype threat and racial differences in citizens' experiences of police encounters. *Law and Human Behavior, 39*(5), 463–477. https://doi.org/10.1037/lhb0000140

Pearse, J., Gudjonsson, G. H., Clare, I. C. H., & Rutter, S. (1998). Police interviewing and psychological vulnerabilities: Predicting the likelihood of a confession. *Journal of Community and Applied Social Psychology*, *8*(1), 1–21.

Perillo, J. T., & Kassin, S. M. (2011). Inside interrogation: The lie, the bluff, and false confessions. *Law and Human Behavior, 35*(4), 327–337. https://doi.org/10.1007/s10979-010-9244-2

Redlich, A. D., Kelly, C. E., & Miller, J. C. (2014). The who, what, and why of human intelligence gathering: Self-reported measures of interrogation methods. *Applied Cognitive Psychology*, *28*(6), 817–828. https://doi.org/10.1002/acp.3040

Redlich, A. D., Kulish, R., & Steadman, H. J. (2011). Comparing true and false confessions among persons with serious mental illness. *Psychology, Public Policy, and Law, 17*(3), 394–418. https://doi.org/10.1037/a0022918

Sandham, A., Dando, C., Bull, R., & Ormerod. T. (in press). Improving professional observers'
veracity judgements by tactical interviewing. *Journal of Police and Criminal Psychology*.
https://doi.org/10.1007/s11896-020-09391-1

Scherr, K. C., Miller, J. C., & Kassin, S. M. (2014) "Midnight confessions": The effect of
chronotype asynchrony on admissions of wrongdoing. *Basic and Applied Social
Psychology, 36*(4), 321-328. http://dx.doi.org/10.1080/01973533.2014.917974

Snook, B., Brooks, D., & Bull, R. (2015). A lesson on interrogations from detainees: Predicting
self-reported confessions and cooperation. *Criminal Justice and Behavior*, *42*(12), 1243–
1260. https://doi.org/10.1177/0093854815604179

Soukara, S., Bull, R., Vrij, A., Turner, M., & Cherryman, J. (2009). What really happens in
police interviews of suspects? Tactics and confessions. *Psychology Crime & Law*, *15*(6),
493–506. https://doi.org/10.1080/10683160802201827

St-Yves, M., & Deslauriers-Varin, N. (2009). The psychology of suspects' decision-making
during interrogation. In R. Bull, T. Valentine, & T. Williamson (Eds.), *Handbook of
Psychology of Investigative Interviewing* (pp. 1–15). Wiley-Blackwell.

Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics* (7th ed.). Boston: Pearson.

Wachi, T., Watanabe, K., Yokota, K., Otsuka, Y., Kuraishi, H., & Lamb, M. (2014). Police
interviewing styles and confessions in Japan. *Psychology Crime & Law*, *20*(7), 673–694.
https://doi.org/10.1080/1068316x.2013.854791

Wachi, T., Watanabe, K., Yokota, K., Otsuka, Y., & Lamb, M. E. (2016a). Japanese suspect
interviews, confessions, and related factors. *Journal of Police and Criminal Psychology*,
31(3), 217–227. https://doi.org/10.1007/s11896-015-9179-0

Wachi, T., Watanabe, K., Yokota, K., Otsuka, Y., & Lamb, M. E. (2016b). Japanese

interrogation techniques from prisoners' perspectives. *Criminal Justice and Behavior*,

43(5), 617–634. https://doi.org/10.1177/0093854815608667

Walsh, D., & Bull, R. (2012). How do interviewers attempt to overcome suspects' denials?

Psychiatry, Psychology and Law, *19*(2), 151–168.

https://doi.org/10.1080/13218719.2010.543756

Yang, Y., Guyll, M., & Madon, S. (2016). The interrogation decision-making model: A general

theoretical framework for confessions. *Law and Human Behavior*.

Zimerman, N., & Tyler, T. R. (2010). Between access to counsel and access to justice:

psychological perspective. *Fordham Urban Law Journal, 37*(1), 473-508.