

Police Perceptions of Crime Victim Behaviors: A Trend Analysis Exploring Mandatory Training and Knowledge of Sexual and Domestic Violence Survivors' Trauma Responses

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Cortney A. Franklin¹ , Alondra D. Garza¹,
Amanda Goodson¹, and Leana Allen Bouffard²

Abstract

Police perceptions of a victim's self-presentation style can have an impact on secondary victimization, case processing, and public safety. Trauma survivors may present to police with flat or restricted affect, emotional numbing, and disjointed recollections. Often, police personnel have misperceived manifestations of trauma as indicators of reliability and credibility. Using a trend design, this study employed a sample of 979 police from one of the five largest U.S. cities to examine the relation between trauma-informed training and endorsement of trauma misperceptions. Multivariate ordinary least squares (OLS) regression models were estimated and revealed mean adherence to trauma misperceptions was significantly lower among participants who had completed training, controlling for demographic,

¹Sam Houston State University, Huntsville, TX, USA

²Iowa State University, Ames, IA, USA

Corresponding Author:

Cortney A. Franklin, Associate Professor, Department of Criminal Justice and Criminology, Sam Houston State University, Box 2294, Huntsville, TX 77341, USA.

Email: Cfranklin@shsu.edu

occupational, and attitudinal variables. Implications and future research are discussed.

Keywords

police perceptions, trauma-informed training, trend design, sexual assault, domestic violence

Sexual and domestic violence have received significant attention as they happen with frequency; have been met with opposition, stigma, and skepticism by criminal justice practitioners; and have long-term negative consequences for survivors. Police responses to victims have received scholarly attention and public scrutiny. For example, untested sexual assault kits in major U.S. cities (Fallik & Wells, 2015; Maguire, King, Wells, & Katz, 2015; Wells, 2016), extralegal factors in investigation of sexual and domestic violence suspects (Holleran, Beichner, & Spohn, 2010; Muftić, Bouffard, & Bouffard, 2007; O'Neal, 2019; Tasca, Rodriguez, Spohn, & Koss, 2013), and sexual and domestic violence case attrition (Beichner & Spohn, 2005; R. Campbell et al., 2014; Maddox, Lee, & Barker, 2012; Schmidt & Steury, 1989; Spohn, Beichner, & Davis-Frenzel, 2001) underscore deficits in criminal justice case processing.

Although not systemic across all agencies, research has documented general shortcomings in victim-centered police response to survivors. These have been, in part, the result of misperceptions regarding the effect of trauma and the ways that first responders expect a crime victim to behave. When expectations have not been met, police have questioned survivor credibility, which has produced secondary victimization (R. Campbell, 2008; R. Campbell & Raja, 2005). Empirical work has demonstrated the callous nature of police responses when victims present with flat affect or do not have demonstrable injuries, torn clothes, make timely reports, or do not exhibit emotional distress or expressive behavioral signs of pain (Barrett & Hamilton-Giachritsis, 2013). Officers have had expectations that "reliable" victims dress conservatively (Sleath & Bull, 2012), have a reputable job (Page, 2008), and present a consistent narrative of events (Alderden & Ullman, 2012; Maddox et al., 2012). In instances where expectations of timely, consistent, and sequential reporting are not met, victims' motives and "truth-telling" have been questioned. Police have suspected false allegations (Venema, 2016), alleged "attention seeking" behavior (Barrett & Hamilton-Giachritsis, 2013, p. 208), and reported diminished credibility (Maddox et al., 2012). In other words, officers' expectations of how survivors should look and act have

directly affected first contacts with police and subsequently, case attrition. When survivors feel invalidated, are met with disbelief, or interpret justice professionals as blaming, trauma symptoms are exacerbated. They have been less likely to cooperate with police and have been more likely to discontinue participating in the formal criminal justice process (R. Campbell, Wasco, Ahrens, Sefl, & Barnes, 2001; Koss, 2000; D. Patterson & Campbell, 2010). Conversely, appropriate police responses (e.g., compassion and empathy, resource referral) have mitigated trauma sequelae, augmented victim statements, and encouraged continued victim cooperation during the investigation (Greenson, Campbell, & Fehler-Cabral, 2014; Maddox, Lee, & Barker, 2011; D. Patterson, 2011a). Police misperceptions surrounding trauma have had adverse consequences for victims, case processing, and public safety. These misperceptions have been the result of limited knowledge and a lack of education in how trauma manifests behaviorally (see, for example, R. Campbell, 2005). Efforts to educate police personnel on the nature of trauma and the multifaceted ways trauma survivors respond to victimization can enhance police preparedness and interactions with victims.

Using a trend design, the present study explores the relation between a mandatory trauma-informed training and police perceptions of trauma among law enforcement personnel commissioned in a large urban police department located in one of the five largest metropolitan cities in the United States. This research directly informs existing literature regarding the accuracy of law enforcement knowledge and the potential benefits that may be gained in providing trauma-informed programming designed to augment police practices when responding to sexual and domestic violence cases.

Sexual and Domestic Violence: Trauma Response

The frequency with which sexual assault and domestic violence occur is pervasive. As many as one in five women have experienced drug/alcohol-facilitated, attempted, or completed rape, and more than a third of women have experienced multiple forms of violence perpetrated by an intimate partner (Black et al., 2011; Breiding et al., 2014; S. G. Smith et al., 2018). Although rates of sexual and domestic violence among men are lower compared with women, according to data just released from the Centers for Disease Control and Prevention (CDC), approximately 2.6% of men have reported attempted or completed rape victimization and nearly 10.9% of men have reported violence perpetrated by an intimate partner (S. G. Smith et al., 2018). In addition, these crimes are consistently underreported. In 2016, just under half (49%) of domestic violence incidents and fewer than one fourth (23%) of

rape and sexual assault incidents were formally reported to law enforcement (Morgan & Kena, 2017).

When interfacing with police, survivors of sexual and domestic violence have often presented with conduct and demeanor that has been inconsistent with the emotionality and behavioral expressiveness traditionally expected by law enforcement personnel (Ask, 2010). First, responders may, in part, fail to consider that these behaviors, such as restricted affect or emotional numbing and avoidance of eye contact, are the result of the physiological effects of trauma (Ask, 2010). Research has noted the extent to which these victims develop clinically diagnosable mental health symptomatology, and specifically, posttraumatic stress disorder (PTSD; J. C. Campbell, 2002; R. Campbell, Dworkin, & Cabral, 2009; Mason & Lodrick, 2013; Tjaden & Thoennes, 1998; Woods, 2005). PTSD is manifested as a result of exposure to acute trauma (e.g., sexual assault, vehicle accident, combat veterans) or chronic, repeated exposure to extreme adverse experiences (e.g., domestic violence, childhood maltreatment). PTSD is exhibited through three hallmark characteristics (Asmundson, Stepleton, & Taylor, 2004), which include the following: (a) reexperiencing the traumatic event through flashbacks or nightmares, (b) avoidance of triggers and emotional numbing, and (c) changes in arousal (American Psychiatric Association [APA], 2013; Yehuda, 2002). Sexual and domestic violence survivors are among those most at risk of PTSD. Johnson and Zlotnick (2006), for example, reported 46.8% of domestic violence shelter residents exhibited PTSD symptoms, and Ham-Rowbottom, Gordon, Jarvis, and Novaco (2005) reported 70% of their domestic violence shelter sample reported avoidance and intrusion scores indicative of PTSD diagnosis. In addition, Rothbaum, Foa, Riggs, Murdock, and Walsh (1992) found that 94% of rape victims reported PTSD symptomatology immediately following the assault, whereas national community samples have indicated nearly 33% of rape victims have reported lifetime PTSD (Kilpatrick, Edmunds, & Seymour, 1992).

Reexperiencing the traumatic event, flashbacks, and nightmares is common among PTSD sufferers. These include intrusive thoughts and distressing dreams that impair a survivor's ability to function, interrupt decision making, and inhibit normal behavior at work or in interpersonal relationships. In addition, avoidance and emotional numbing have encouraged survivor efforts to circumvent any event, person, or place that triggers recollection of the original trauma. Related to interaction with the criminal justice system, survivors have delayed formal reporting to law enforcement due to maladaptive coping behaviors, such as avoidance of talking about the incident—a consequence of PTSD (Ullman & Filipas, 2001). Disjointed recollection has also been a common consequence of PTSD. Oftentimes, the memory encoding process

is disrupted during traumatic experiences, which can result in amnesia or fragmented memories (Hardy, Young, & Holmes, 2009; Mason & Lodrick, 2013). Subsequently, survivors may provide multiple, inconsistent, and non-linear recollection of victimization events that piece together like a puzzle rather than a sequential narrative of what has transpired (Hardy et al., 2009; Maddox et al., 2012; Mason & Lodrick, 2013).

Moreover, PTSD is characterized by changes in arousal at the physiological level (APA, 2013; Yehuda, 2002). This can mean that a survivor's response to interactions with law enforcement may not present as expected—they may experience hyperarousal and respond in ways not commensurate with the circumstances or may present with dysregulated or flat affect, leading first responders to question the accuracy and credibility of a victim's story. Maladaptive behavior patterns, such as withdrawal or a restricted range of emotions, mistrust of others, or interpersonal hypervigilance (Markowitz, Milrod, Bleiberg, & Marshall, 2009), may further introduce skepticism by police personnel because victims do not fit the traditional behavioral narrative. Furthermore, PTSD sufferers internalize traumatic events, which has produced negative emotions, such as shame and guilt, which may frequently evolve into behaviors such as lack of eye contact, increased agitation, and purposeful avoidance (Lee, Scragg, & Turner, 2001; Mason & Lodrick, 2013). These behavioral displays can influence the manner in which survivors disclose victimization and affect how police interpret and/or “trust” their disclosure.

Police Misperceptions of Trauma and Case Attrition

When victims of sexual and domestic violence take the first step to formally report a crime, the responding officer will conduct an interview and take the victim's statement, asking for details to include in the incident report. These initial interactions and the information that is provided by the victim and any witnesses are used by the responding officer to determine whether a case is worthy of additional investigation (Spohn & Tellis, 2012). Called the gatekeepers of the criminal justice system (LaFree, 1989), police personnel exercise virtually unfettered discretion when making decisions regarding the suitability of a case in terms of victim worthiness, credibility, and whether or not continued investigation would be fruitful for case clearance (see, for example, O'Neal, 2019, for related discussion).

The behavioral response exhibited by trauma survivors has been quite varied due to the multifaceted nature of trauma on the body both psychologically and physiologically; therefore, any “abnormal” or unexpected conduct or demeanor may decrease perceptions of credibility by law enforcement

personnel (Ask & Landström, 2010; Bollingmo, Wessel, Eilertsen, & Magnussen, 2008; Maddox et al., 2012; Venema, 2016), introducing secondary victimization, aggravating case attrition, and delaying or interrupting the apprehension of suspects. To be sure, trauma manifestations have had a significant impact on the manner in which police officers perceive crime victim behaviors. Victims who have presented with flat affect, emotional numbing, avoidance of eye contact, and disjointed recollection of events may signal to criminal justice gatekeepers that they are not “worthy victims” or are behaving deceptively (Ask, 2010; Bollingmo et al., 2008; Maddox et al., 2012). For these reasons, police attributions surrounding trauma manifestations among sexual and domestic violence survivors can play a key role in a variety of criminal justice processing outcomes and victim-related interactions—thus warranting increased research attention.

There is limited existing research on trauma response and police perceptions of credibility based on trauma misperceptions, and those few studies have been predominantly conducted outside the United States. Bollingmo and colleagues (2008), for example, assessed attributions of victim credibility among 69 Norwegian police officers who were presented with three manipulated, video-recorded victim statements varying in emotional display. In the congruent condition, the victim exhibited despair and was crying. The neutral condition depicted a victim with flat affect and minimal emotion. The incongruent condition presented a victim with positive emotions. Officers rated the highest credibility for the congruent condition and lowest credibility for the incongruent condition (Bollingmo et al., 2008), underscoring the ways police expect visible displays of negative emotion following victimization.

Related, Ask and Landström (2010) examined credibility attributions among 189 Swedish police trainees following participant exposure to two video depictions of a rape victim statement. Victim demeanor was manipulated to include an emotionally expressive victim who was crying and trembling while recalling the incident and a victim who presented with restricted affect and spoke in a confident, matter-of-fact tone. Police trainees rated the emotionally expressive victim as more credible compared with the victim with restricted affect. More recently, Maddox et al. (2012) explored perceptions of victim reliability among 76 police officers in the United Kingdom. Participants rated Likert-type scale items such as “victim seems scared” and “victim avoids talking about the rape” as indicators of increased victim reliability (Maddox et al., 2012, p. 41). Police officers attributed increased victim reliability based on items that described an emotional self-presentation style, whereas items describing avoidance behaviors were attributed less victim reliability (Maddox et al., 2012).

Existing findings have highlighted the durability of misperceptions regarding survivor self-presentation, demeanor, and reporting behavior in terms of how police personnel expect a crime victim to act. Expectations for hysteria, expressive emotionality, and visual despair may be derived from misinterpretations surrounding the physiological trauma response. Although these studies are relevant to understanding police officer misperceptions of trauma responses and provide an instructive starting point for examining law enforcement response to crime victims, generalizability is limited due to the exclusive use of international samples. In addition, to the best of our knowledge, no empirical, published studies have examined police officer perceptions of trauma manifestations as related to sexual and domestic violence victims. In other words, research has yet to assess law enforcement familiarity with the multifaceted nature of trauma response.

Importantly, when crime victims fail to meet behavioral expectations, police have characterized victim demeanor as deceptive, unreliable, and uncooperative (Ask, 2010; Barrett & Hamilton-Giachritsis, 2013; Maddox et al., 2012; Venema, 2016). To that end, when victims experience negative reactions from criminal justice practitioners, such as skepticism, discounting their retelling of events, and culpability attributions, victims experience retraumatization or secondary victimization (R. Campbell et al., 2001; D. Patterson, 2011b; Ullman & Filipas, 2001). Adverse police responses resulting from trauma misperceptions diminish the possibility that victims will participate in the criminal justice system, further exacerbating case attrition and aggravating negative health consequences for survivors (Maddox et al., 2012; Monroe et al., 2005; Parsons & Bergin, 2010). Similarly, police misperceptions of trauma responses may, in part, be due to a lack of specialized training and education concerning the range of ways trauma can be expressed following victimization (R. Campbell, 2005).

Impulsivity

A large body of literature has demonstrated the important role that impulsivity, drawn from the broader construct of low self-control, has on offending and analogous behavior (e.g., Franklin, Bouffard, & Pratt, 2012; Pratt & Cullen, 2000), the vulnerability-enhancing nature of increased victimization risk (e.g., Franklin, 2011, 2016; Franklin, Franklin, Nobles, & Kercher, 2012; Pratt, Turanovic, Fox, & Wright, 2014), and the link between impulsivity and problematic attributions such as rape myth acceptance (Franklin, Bouffard, et al., 2012) and prostitution myth endorsement (Menaker & Franklin, 2018) that may produce negative outcomes for marginalized populations. Limited work has extended this latent construct to decision making

among police personnel. In particular, studies have thus far included impulsivity as a predictor of police behavior and specifically, police misconduct (Donner & Jennings, 2014; Pogarsky & Piquero, 2004). An examination of impulsivity among police personnel may be also warranted to better understand attributions surrounding trauma as the nature of impulsivity anticipates a lack of critical thinking and a reliance on stereotypes or methods of information gathering that do not require abstract thinking. Indeed, it may be that impulsivity mitigates the effect of training on trauma misperceptions such that individuals high in impulsivity also report increased levels of trauma misperception.

Effectiveness of Police Training

Recent years have seen efforts to implement policy, training, and institutional protocols to try to facilitate positive relationships between law enforcement personnel and victims of crime. The Department of Justice (2015) authoritative guidance on identifying and preventing gender bias identified eight principles to assist law enforcement in building policies, training, and practice to assist crime victims and hold offenders accountable. Ideally then, administration of police training should reduce gender bias and enhance the appropriate handling of sexual and domestic violence cases, including investigation, interagency and personnel cooperation, and prosecution. Despite these noteworthy implications, few studies have examined the effectiveness of police training and responses to crime victims, and only one international study has evaluated training on the nature of trauma.

The small body of literature has incorporated a range of substantive issues that include evaluation of police training on diversity and the lesbian, gay, bisexual, transgender, and queer (LGBTQ) community (Israel et al., 2017; Israel et al., 2016; Israel, Harkness, Delucio, Ledbetter, & Avellar, 2014; Miles-Johnson, 2016), prejudice-motivated crime (Miles-Johnson, Mazerolle, Pickering, & Smith, 2018), human trafficking (Renzetti, Bush, Castellanos, & Hunt, 2015), child abuse (G. T. Patterson, 2004), domestic violence (Oehme, Prost, & Saunders, 2016), and sexual assault (Darwinkel, Powell, & Tidmarsh, 2015; Goodman-Delahunty & Graham, 2011; Lonsway, Welch, & Fitzgerald, 2001; Sleath & Bull, 2012; M. Smith, Wilkes, & Bouffard, 2016). Collectively, findings have suggested participation in training has had a mixed effect on practitioner attitudes, cognitions, and behaviors directed toward victims, perpetrators, and marginalized communities, and when attitude change has been observed, it has not directly translated to behavior or it has not remained stable over time.

Despite the importance and potential implications of training, only one study has assessed the effect of training on trauma misperceptions (Ask, 2010). Using a sample of 211 Swedish police officers, Ask (2010) reported that prior training on crime victims' psychological presentation produced a decrease in the interpretation of emotional expressiveness as an indicator of victim credibility compared with nonparticipating officers. This finding is promising, yet limited in its utility due to concerns surrounding generalizability to a U.S. context. Much remains unknown about trauma misperceptions among police personnel, including the degree to which specialized training is related to knowledge of trauma among a large, diverse, metropolitan U.S. police department.

Purpose of the Present Study

Assessing trauma misperceptions among police personnel is an important endeavor given the wide variation in crime victim behaviors following trauma. The present study addressed the following research questions:

Research Question 1 (RQ1): Among the pretraining sample, what is the extent of endorsement of trauma misperceptions?

Research Question 2 (RQ2): Is training related to decreased endorsement of trauma misperceptions?

Method

The method used is the evaluation of the relation between mandatory trauma-informed training and misperceptions of trauma-assessed differences in average levels of police participants' appraisal of behavioral signs of trauma as indicators of truthfulness, trustworthiness, and accuracy in reporting victimization by using a trend design. The Texas Commission on Law Enforcement (TCOLE) has mandated two 24-month periods in a training cycle from 2017 to 2021 for all licensed and certified Texas Peace Officers.¹ The training mandate requires 40 hr that includes general courses on state and federal laws, cultural diversity, investigative topics, and crisis intervention. During the first of these two 24-month periods, 5,300 police personnel participated in an innovative, agency-wide, mandated, 4-hr training block—the first of its kind for this particular agency—as part of the larger 40-hr unit, which addressed best practices in responding to crimes of sexual and family violence, gender bias, neurobiology of trauma, and resource referral for sexual and family violence survivors. The training cycle began on September 1, 2016, and concluded on August 31, 2017. Sessions were held once a week, and training was

administered by police personnel and professional victim advocates/trainers from the local county women's center. Material was delivered via PowerPoint, and training participants were provided with supplemental written materials to augment the lecture-based curriculum. Police attendees received Texas Commission of Law Enforcement (TCOLE) credits in fulfillment of their peace officer license obligations.

Pretraining Data

Baseline, pretraining data were collected in August 2016, prior to the beginning of the 2016-2017 training cycle. This took place during roll-calls at all 14 metropolitan police department substations. Roll-calls were held at 6:00 and 7:00 a.m., 2:00 and 3:00 p.m., and 10:00 and 11:00 p.m. Due to time and resource constraints, a purposive sample of roll-call times was selected for all 14 substation locations based on the anticipated number of officers present at each location, taking into consideration scheduled leave and experience in handling sexual and family violence calls for service (CFS) to maximize participation.² Reminder announcements were made by police Lieutenants from the Special Victims' Division prior to the scheduled survey administration date to further facilitate participation in the pretraining survey. On the scheduled date, pencil-and-paper surveys were administered to commissioned personnel who were present for roll-call after reading an institutional review board (IRB)-approved description of the study that highlighted the voluntary and anonymous nature of participation. The pretraining survey was described to participants as "Police Attitudes about Crime and Victimization." Items were presented in set order and completion took approximately 25 min. In total, 694 surveys were handed out and 633 surveys were returned, for a response rate of 91.2%. Of the 633 surveys, 514 surveys had completed data. Sample demographics for the pretraining data are presented in Table 1.

Posttraining Data

Posttraining data were collected using Qualtrics, an online survey platform. During the year-long training cycle (September 1, 2016, to August 31, 2017), police attendees at each weekly training session were verbally notified about the opportunity to participate in a voluntary and anonymous survey. Attendees were provided with a postcard that described the survey as "Police Attitudes About Crime and Victimization," detailed information about how to access the survey online (including the Qualtrics URL), and provided information about the legal-counsel-approved incentive that described tiered donations to The Police Foundation to encourage participation.³ Follow-up email

Table 1. Demographic Characteristics of Participants for the Full Sample.

Variables	<i>N</i>	%	<i>M</i> (<i>SD</i>)	Range
Participant age			41.45 (10.24)	21-72
Participant sex				
Male	793	81.0		
Female	186	19.0		
Participant race/ethnicity				
White	426	43.5		
Black	202	20.6		
Latino/a	251	25.6		
Asian/Pacific Islander	69	7.0		
Native American/Alaska Native	4	0.4		
Other	27	2.8		
Educational attainment				
High school	58	5.9		
Some college	240	24.5		
Two-year degree	107	10.9		
Four-year degree	370	37.8		
Graduate school	204	20.8		
Years of service			15.07 (10.27)	0-42
Number of family violence calls in previous 12 months				
None	331	33.8		
1-5	113	11.5		
6-10	79	8.1		
11-20	118	12.1		
21 or more	338	34.5		
Number of sexual assault calls in previous 12 months				
None	456	46.6		
1-5	383	39.1		
6-10	83	8.5		
11-20	26	2.7		
21 or more	31	3.2		
Training				
Pretraining	514	52.5		
Posttraining	465	47.5		

reminders were sent by police personnel to each training cohort at 2, 4, and 8 weeks after training (see Dillman, Smyth, & Christian, 2014), with the same information that had been contained on the solicitation postcards.

Upon accessing the survey link, police participants were provided with an IRB-approved consent statement that ensured voluntary and anonymous participation. The online survey took approximately 30 min to complete and included the same items contained in the pretraining, baseline survey with additional sections on decision making in sexual and family violence cases—the latter are not employed in the present analysis and will not be discussed further. Online survey administration yielded 1,221 responses, for a response rate of 23.03%. Of those, 468 provided completed data. Sample demographics for the posttraining sample are presented in Table 2.

Volunteer surveys administered online without direct incentive have produced similar or lower response rates.⁴ A recent meta-analysis of 497 published police surveys spanning a 9-year period demonstrated that response rates have declined over time, are more problematic when not administered in-person, and are not responsive to Dillman et al.'s (2014) method due to unique challenges gathering information from law enforcement, including police cynicism and distrust of researchers (see Nix, Pickett, Baek, & Alpert, 2019). Nix et al. (2019) have suggested low response rates among police surveys are a poor indicator of nonresponse bias and an insufficient rationale to dismiss a study's merit, particularly when the survey includes sensitive material. In other words, despite low response, recent research has underscored the manner in which conclusions can be drawn in terms of findings from data collected from police personnel, even with suboptimal response rates.

To facilitate officer participation, data collection during both the pre- and posttraining periods was anonymous, which means data from individual participants were not linked over time (see also Renzetti et al., 2015, for similar methodology). One item contained in the posttraining survey asked participants whether they had completed a similar survey prior to training. One hundred fourteen cases reported affirmative responses. To maintain independent samples between pre- and posttraining groups, these cases were eliminated from analyses. In addition, five cases with outliers on *age* and *years of service* were deleted from analyses.⁵ In total, 465 cases provided completed data and were not duplicate participants in the pretraining data. Comparisons presented here, then, reflect a trend design in which different samples from the same population are surveyed at different time periods.⁶

Dependent Variable: Trauma Misperceptions

An initial pool of nine items was generated from Ask's (2010) nine-item Beliefs About Crime Victim Behaviors index. Items were measured on a 6-point Likert-type scale from 0 (*strongly disagree*) to 5 (*strongly agree*). The

Table 2. Demographic Characteristics of Participants in the Pre- and Posttraining Subsamples.

Variables	Pretraining subsample		<i>M</i> (<i>SD</i>)	Posttraining subsample		<i>M</i> (<i>SD</i>)
	<i>N</i>	%		<i>n</i>	%	
Participant age	514	—	38.08 (10.31)	465		45.18 (8.76)
Participant sex						
Male	457	88.9		336	72.3	
Female	57	11.1		129	27.7	
Participant race						
White	191	37.2		235	50.5	
Black	123	23.9		79	17.0	
Latino/a	143	27.8		108	23.2	
Asian/Pacific Islander	41	8.0		28	6.0	
Native American/ Alaska Native	2	0.4		2	0.4	
Other	14	2.7		13	2.8	
Educational attainment						
High school	39	7.6		19	4.1	
Some college	142	27.6		98	21.1	
Two-year degree	61	11.9		46	9.9	
Four-year degree	208	40.5		162	34.8	
Graduate school	64	12.5		140	30.1	
Years of service			11.74 (9.88)			18.74 (9.42)
Number of family violence calls in previous 12 months						
None	34	6.6		297	63.9	
1-5	49	9.5		64	13.8	
6-10	60	11.7		19	4.1	
11-20	89	17.3		29	6.2	
21 or more	282	54.9		56	12.0	
Number of sexual assault calls in previous months						
None	117	22.8		339	72.9	
1-5	292	56.8		91	19.6	
6-10	66	12.8		17	3.7	
11-20	21	4.1		5	1.1	
21 or more	18	3.5		13	2.8	

nine items were subjected to exploratory factor analysis (EFA), with maximum likelihood estimation, which produced one primary factor comprising seven items with an eigenvalue >1, accounting for 15.86% of the variance.

Factor loadings ranged from .616 to .728 and were summed to create an additive index from 0 to 35, with higher scores representing increased adherence to misperceptions of trauma ($M = 14.82$; $SD = 6.95$). Internal consistency reliability, measured by Cronbach's alpha, was acceptable ($\alpha = .856$). Mean values for the seven items that comprised the trauma misperceptions index ranged from 1.73 to 2.53 and standard deviations ranged from 1.25 to 1.44, indicating adequate variability. The appendix presents the items and factors loadings for the 7-point index.

Predictor Variable: Trauma-Informed Training

Participation in agency-wide, mandated training was captured as a dichotomous variable to identify the pretraining and posttraining samples (pretraining = 0 [$n = 514$; 52.5%]; posttraining = 1 [$n = 465$; 47.5%]).

Control Variables

A series of eight theoretically relevant control variables were included in the present multivariate analysis to determine the relation between training and trauma misperceptions while accounting for potentially confounding variables: sex, race/ethnicity, educational attainment, years of service, family violence call responses in previous 12 months, sexual assault call responses in previous 12 months, rape myth acceptance, and impulsivity.

Participant sex was a dichotomous variable (male = 0 [$n = 793$; 81.0%]; female = 1 [$n = 186$, 19.0%]).

Race/ethnicity was a categorical variable (White = 0 [$n = 426$, 43.5%], African American = 1 [$n = 202$, 20.6%], Latino/a = 2 [$n = 251$, 25.6%], Asian American/Pacific Islander = 3 [$n = 69$, 7.0%], Native American/Alaskan Native = 4 [$n = 4$, 0.4%], Other = 5 [$n = 27$, 2.8%]) and was recoded into three dummy variables: "White," "Latino/a," and "African American," with "White" as the reference category.

Educational attainment was an ordinal variable (high school = 0 [$n = 58$; 5.9%]; some college = 1 [$n = 240$; 24.5%]; 2-year degree = 2 [$n = 107$; 10.9%]; 4-year degree = 3 [$n = 370$; 37.8%]; graduate school = 4 [$n = 204$; 20.8%]).

Years of service was a continuous variable that asked participants, "How many years have you been a police officer?" ($M = 15.07$, $SD = 10.27$).

Number of family violence calls in previous 12 months was an ordinal variable that captured number of "family violence" calls participants had responded to in the past 12 months (none = 1 [$n = 331$, 33.8%], "1 to 5" = 2 [$n = 113$, 11.5%], "6 to 10" = 3 [$n = 79$, 8.1%], "11 to 20" = 4 [$n = 118$, 12.1%], 21 or more = 5 [$n = 338$, 34.5%]).

Number of sexual assault calls in previous 12 months was an ordinal variable that captured number of “sexual assault” calls participants had responded to in the past 12 months (“none” = 1 [$n = 456$; 46.6%], “1 to 5” = 2 [$n = 383$, 39.1%], “6 to 10” = 3 [$n = 83$, 8.5%], “11 to 20” = 4 [$n = 26$, 2.7%], “21 or more” = 5 [$n = 31$, 3.2%]).

Participant rape myth adherence was captured using Payne, Lonsway, and Fitzgerald’s (1999) 20-item Illinois Rape Myth Acceptance–Short Form (IRMA-SF) measuring attitudes that blame the victim, excuse the perpetrator, and justify sexual assault. Existing research has demonstrated the degree to which police personnel adhere to rape-tolerant myths and the damage this can have on encounters with survivors of sexual and domestic violence. Endorsement of misperceptions regarding the manifestations of trauma may be correlated with rape myth acceptance as expectations for behavioral displays of emotion, despair, and hysteria are captured under the umbrella of a “real rape victim” narrative. Responses to the IRMA-SF were measured on a 6-point Likert-type scale from 0 (*strongly disagree*) to 5 (*strongly agree*). Items were summed to create a scale from 0 to 100, where increased values represented higher levels of rape myth acceptance ($M = 19.41$, $SD = 11.05$). Internal consistency reliability was acceptable ($\alpha = .844$).

Impulsivity. Recent research has identified the relation between the broader construct of low self-control and adherence to stereotypes and myths surrounding sensitive topics such as rape (Franklin, Bouffard, et al., 2012) and prostitution (Menaker & Franklin, 2018).⁷ These are the types of ideologies where critical and abstract thinking—traits associated with decreased impulsivity—would decrease adherence. In other words, persons low in self-control would rely on easily accessible stereotypes and biases to formulate decisions regarding topics that would require abstract and critical, rather than concrete, thinking. As a result, impulsivity was included in the present analysis as a control variable. An initial pool of four items was generated from the impulsivity subscale of Grasmick, Tittle, Bursik, and Arneklev’s (1993) widely used low self-control measure. Items were measured on a 6-point Likert-type scale ranging from 0 (*strongly disagree*) to 5 (*strongly agree*). The four items were subjected to EFA with maximum likelihood estimation, which produced one factor comprising three items with an eigenvalue >1 , accounting for 45.62% of the variance. Factor loadings on three items ranged from .487 to .721 and were summed to create an additive index from 0 to 15 where increased values represented increased impulsivity ($M = 3.57$, $SD = 2.92$). Internal consistency reliability was adequate ($\alpha = .635$). Mean values for the three items that comprised the impulsivity index ranged from 0.78 to 1.69 and standard deviations ranged from 1.20 to 1.40, indicating adequate variability.

Analytic Strategy

The present study proceeded in three stages. First, a zero-order correlation matrix, means, and standard deviations were reported for study variables. Next, a multivariate ordinary least squares (OLS) regression model was estimated to determine the relation between training and trauma misperceptions while considering additional predictor/control variables. Semipartial correlation coefficients were calculated and reported to estimate the unique variance accounted for by each significant variable on trauma misperceptions.⁸

Results

Zero-Order Correlation Matrix, Means, and Standard Deviations of Study Variables

Table 3 presents the zero-order correlation matrix for the full sample. There were several significant relations between the dependent variable and control/predictor variables. Trauma misperceptions were negative and significantly related to trauma training, $r_s(977) = -.35, p = .000$. In contrast, rape myth acceptance was a significant and positive predictor of trauma misperceptions, $r_s(977) = .42, p = .000$, and this relation was moderate. Additional significant positive, but weak relations emerged between impulsivity and trauma misperceptions, $r_s(977) = .17, p = .000$, family violence CFS and trauma misperceptions, $r_s(977) = .21, p = .000$, and sexual assault CFS and trauma misperceptions, $r_s(977) = .17, p = .000$. Findings demonstrated several additional interesting bivariate findings. Significant, negative relations emerged between trauma training (no = 0, yes = 1) and rape myth acceptance, $r_s(977) = -.26, p = .000$; a moderate, negative significant relation emerged between trauma training and family violence CFS, $r_s(977) = -.62, p = .000$; and a moderate, negative significant relation emerged between trauma training and sexual assault CFS, $r_s(977) = -.47, p = .000$.

In assessing study variables, participants scored at the approximate scale midpoint on trauma misperceptions ($M = 14.82; SD = 6.95$). In addition, participants scored well below the scale midpoint on rape myth acceptance ($M = 19.41; SD = 11.05$) and on impulsivity ($M = 3.57; SD = 2.92$), with some variability in responses. One third of the participants reported no experience responding to family violence CFS in the previous 12 months ($n = 331; 33.8\%$), and nearly half of participants reported no experience responding to sexual assault CFS in the previous 12 months ($n = 456; 46.6\%$).

Table 4 presents the zero-order correlation matrix for the pre- and post-training subsamples. Among the pretraining participants, there was a positive,

Table 3. Summary of Correlations, Means, and Standard Deviations for Study Variables in the Full Sample.

Measure	1	2	3	4	5	6
1. Trauma misperceptions	—					
2. Trauma training ^a	-.32*	—				
3. Rape myth acceptance	.42*	-.26*	—			
4. Impulsivity	.17*	-.02	.32*	—		
5. Family violence CFS	.21*	-.62*	.18*	-.04	—	
6. Sexual assault CFS	.17*	-.47*	.14*	-.03	.71*	—
M	14.82		19.41	3.57		
SD	6.95		11.05	2.92		

Note. For all scales, higher scores are indicative of more extreme responding in the direction of the constructed assessment. CFS = child and family services.

^aNo trauma training = 0, trauma training = 1.

*Correlation is significant at the $p < .05$ level (two-tailed).

Table 4. Summary of Correlations, Means, and Standard Deviations for Study Variables in the Pre- and Posttraining Subsamples.

	1	2	3	4	5	M	SD
1. Trauma misperceptions	—	.34*	.01*	.02	.05	12.68*	6.98
2. Rape myth acceptance	.38*	—	.42*	.06	.06	17.17*	10.82
3. Impulsivity	.24*	.30*	—	-.03	-.01	3.48	2.81
4. Family violence CFS	-.00	.00	-.07	—	.43*	0.89*	1.42
5. Sexual assault CFS	.03	-.02	-.10*	.66*	—	0.41*	0.85
M	16.76*	21.44*	3.65	3.04*	1.09*		
SD	6.32	10.87	3.03	1.28	0.91		

Note. Correlations for the pretraining subsample are presented above the diagonal, and correlations for the posttraining subsample are presented below the diagonal. Means and standard deviations for the pretraining subsample are presented in the horizontal rows, and means and standard deviations for the posttraining subsample are presented in the vertical columns. For all scales, higher scores are indicative of more extreme responding in the direction of the constructed assessment. CFS = child and family services.

*Correlation is significant at the $p < .05$ level (two-tailed).

significant relation between trauma misperceptions and rape myth acceptance, $r_s(512) = .34, p = .000$, and between trauma misperceptions and impulsivity, $r_s(512) = .01, p = .023$. There was also a positive, significant relation between impulsivity and rape myth acceptance, $r_s(512) = .35, p = .000$, and between sexual assault CFS response and family violence CFS

response in the pretraining subsample, $r_s(512) = .43, p = .000$. Among the posttraining participants, similar findings emerged. A positive significant relation was observed between trauma misperceptions and rape myth acceptance, $r_s(463) = .38, p = .000$, and between trauma misperceptions and impulsivity, $r_s(463) = .24, p = .000$. There was a significant, but weak, negative relation between impulsivity and sexual assault CFS, $r_s(463) = -.10, p = .034$. Finally, in the posttraining sample, sexual assault CFS and family violence CFS were significantly positively related, $r_s(463) = .66, p = .000$.

Table 4 also presents mean differences among the study variables between pretraining and posttraining subsamples using independent-samples *t* tests (pretraining = 0; posttraining = 1). There were significant between-group differences on all but one variable: impulsivity. Specifically, the pretraining subsample reported increased scores on the trauma misperceptions scale, $t(939) = 9.53, p = .000$, and increased rape myth adherence compared with the posttraining subsample, $t(977) = 6.15, p = .000$. The pretraining subsample reported responding to significantly more family violence CFS, $t(977) = 24.99, p = .000$, and significantly more sexual assault CFS, $t(977) = 11.97, p = .000$, compared with the posttraining subsample.

Multiple OLS Regression Model Predicting Trauma Misperceptions

Table 5 presents the results of the multiple OLS regression model predicting trauma misperceptions while independent and control variables were entered simultaneously. The seven-item trauma misperceptions index was regressed on the binary trauma-informed training measure, demographic variables, rape myth acceptance, and participant impulsivity. The regression equation presented in the model was significant, $R^2 = .23, F(10, 968) = 29.95, p = .000$. Trauma training (no = 0, yes = 1) was a significant negative predictor of trauma misperceptions, $b = -0.20, t = -5.26, p = .000$, such that those individuals who completed training reported decreased adherence to misperceptions surrounding the suite of attitudes regarding stereotypical trauma response as representing "genuine" victims when compared with the sample of individuals who had not participated in trauma training. In terms of demographic characteristics, sex of participant (male = 0, female = 1) was a significant negative predictor of trauma misperceptions, $b = -0.07, t = -2.18, p = .029$, such that women reported decreased endorsement of trauma misperceptions compared with men. Years of service in law enforcement was also a significant negative predictor of trauma misperceptions, $b = -0.08, t = -2.39, p = .017$, suggesting that police personnel with longer job tenure reported

Table 5. Multivariate Ordinary Least Squares Regression Model Predicting Trauma Misperceptions.

Variables	<i>b</i>	β	<i>t</i> ratio	<i>sr</i> ²
Trauma-informed training	-2.72	-0.20	-5.23*	.02
Female	-1.16	-0.07	-2.18*	.00
Black	-0.67	-0.04	-1.30	.00
Latino/a	0.83	0.05	1.72†	.00
Educational attainment	-0.13	-0.02	-0.75	.00
Years of service	-0.05	-0.08	-2.39*	.00
Family violence CFS	-0.06	-0.01	-0.32	.00
Sexual assault CFS	-0.05	-0.01	-0.19	.00
Rape myth adherence	0.20	0.32	10.26*	.08
Impulsivity	0.15	0.07	2.15*	.00
Constant	13.02		13.38*	
Model <i>R</i>		.47*		
<i>R</i> ²		.23*		
<i>F</i>		29.95*		

Note. *sr*² = semipartial correlation. CFS = child and family services.

†*p* < .10. **p* < .05.

decreased adherence to trauma misperceptions. Rape myth acceptance was a significant positive predictor of trauma misperceptions, and the magnitude of this relation was strong, $b = 0.32$, $t = -10.26$, $p = .000$, reiterating the potential overlap between latent constructs captured by adherence to rape myths and those stereotypical expectations for trauma-related behavior. Impulsivity was also a significant positive predictor of trauma misperceptions, $b = 0.07$, $t = 2.15$, $p = .032$, suggesting that police personnel with higher levels of impulsivity reported stronger adherence to trauma misperceptions. To further clarify these relations, semipartial correlations were calculated and indicated that trauma-informed training accounted for 2% of the unique variance in the dependent variable. Eight percent of the unique variance in trauma misperceptions was accounted for by participant endorsement of rape myths.

Discussion

The present study contributed to the narrow program of research that has examined the relation between training and misperceptions of trauma using a sample of police officers from a large urban police department in one of the five largest metropolitan cities in the United States. Several findings are worthy of additional discussion.

First, results from this study indicate that, among the pretraining sample, police participants reported endorsement of trauma misperceptions, suggesting average adherence to attributions that support stereotypical trauma response, such as emotionality, despair, timely reporting, and a linear recollection of victimization events (RQ1). These results reiterate limited existing research among a Swedish sample (see Ask, 2010). Adherence to this type of misinformation has the potential to further exacerbate posttrauma sequelae for survivors and aggravate case attrition. Program evaluation research, and particularly evaluation of trauma-informed training, is significantly underdeveloped. Future endeavors should continue to examine the extent to which police samples in other geographic regions, employed by mid-sized or smaller agencies, and located in suburban and rural communities in the United States adhere to trauma misperceptions and the effect that training may have on dismantling these myths. In addition, it would be fruitful to assess trauma misperceptions among other justice and social system personnel, such as prosecutors, judges, victim advocates, and representatives from nongovernmental organizations to determine how these beliefs influence decision making when addressing sexual and family violence survivors.

Second, the present study was concerned with whether training was related to decreased endorsement of trauma misperceptions using a trend design while controlling for relevant demographic, occupational, and attitudinal police participant characteristics (RQ2). Findings from the multivariate OLS regression model demonstrated that police personnel in the sample who had participated in trauma-informed training reported significantly reduced endorsement of trauma misperceptions compared with the pretraining sample. Despite the relatively weak relation between training and trauma misperceptions, this was only one of two significant predictors that emerged while considering relevant variables on trauma misperceptions. These results replicate existing research on ways specialized training has improved attitudes among law enforcement (Darwinkel et al., 2015; M. Smith et al., 2016), and specifically, trauma misperceptions (Ask, 2010). From a policy standpoint, systematized training offered to all police practitioners would be of substantial benefit for first contacts with sexual and family violence survivors, investigative efforts among specialty law enforcement personnel, case attrition, suspect apprehension, and public safety. Indeed, results presented here point to the potential for the 2015 Department of Justice guidance to improve law enforcement responses and decrease gender bias in responding to sexual and domestic violence survivors through victim-centered approaches to enhancing first contacts and follow-up investigations to encourage victim participation and decrease case attrition.

Third, results identified the role of officer sex and years of service as significant predictors of trauma misperceptions. In a multivariate model, male participants adhered to increased levels of trauma misperceptions compared with females, after considering training—a finding that reiterates research on general responses to victimization among college and community samples of women. Specifically, women have responded more positively to victims of interpersonal crime compared with men (Nicksa, 2014), including decreased attributions of victim blame in sexual assault scenarios (Hockett, Smith, Klausing, & Saucier, 2016), increased bystander intervention behavior (Banyard, 2008), and increased willingness to provide resource referral for social and mental health services following sexual assault disclosure (Franklin & Garza, 2018). Studies have also illustrated improved responses to sexual and family violence survivors from female officers (e.g., Rich & Seffrin, 2014) compared with male counterparts. That said, it would be problematic to address sexual and family violence using only female first responders and investigators as all police personnel, regardless of sex or gender, should be able to effectively respond to survivors in a victim-centered and trauma-informed way, particularly given the gendered history of policing and the great strides in the professionalization and integration of women in all facets of law enforcement (e.g., Miller, 1999). Relying solely on female practitioners short-changes opportunities for male police personnel to develop a wide repertoire of skills in appropriately handling cases involving these types of crimes.

In addition, officers in the present analysis with more years of service reported decreased trauma misperceptions. This is likely an artifact of the long-term exposure and subsequent wisdom developed over a law enforcement career from responding to crime victims who display a wide range of behavioral and mental health characteristics following a traumatic event.

It is noteworthy that rape myth acceptance predicted increased endorsement of trauma misperceptions. In line with existing research, police participants demonstrated low adherence to rape-related myths that deny offense seriousness, blame the victim, and excuse the perpetrator (Page, 2007; Rich & Seffrin, 2012). That said, the multivariate OLS regression model revealed rape myth acceptance as the *strongest* significant predictor of trauma misperceptions. This finding is instructive for two reasons. First, it would seem that some of the same underlying stereotypes and misperceptions surrounding trauma response would fall within the suite of attributions directed toward rape survivors. For instance, rape myths suggesting “it wasn’t really rape” (Payne, Lonsway, & Fitzgerald, 1999, p. 51) may be salient for first responders who endorse trauma misperceptions when victims fail to present with emotional expressiveness, visible signs of despair, or are unable to recall a linear timeline of victimization events. Second, rape myth acceptance was a

significant positive predictor after considering trauma-informed training that was specifically designed to counter myths and misperceptions related to sexual and family violence survivors. The latter finding underscores the resilience of rape mythology and the negative role that adherence to this collection of attributions can have on sexual and family violence case processing. This underscores the need for additional programming designed to decrease rape myth acceptance and further inculcate the importance of empathy, compassion, and victim-centeredness in responding to sexual and family violence. Doing so has the capacity to enhance trauma-informed police practice, engage victim cooperation, and increase case processing for sexual and family violence crimes.

Finally, impulsivity emerged as a significant predictor of trauma, reiterating findings presented in the bivariate models and earlier research on the role of impulsivity in predicting adverse attributions. Research has indicated that low self-control—the broader latent construct comprising impulsivity (Grasmick et al., 1993)—has been correlated with acceptance of rape myths (see Franklin, Bouffard et al., 2012) and prostitution myth endorsement (Menaker & Franklin, 2018) among college populations, suggesting that some of the characteristics of impulsivity may also correlate with attributions that require complex, abstract, and critical thinking—the types of behaviors that those high in impulsivity would be unlikely to engage in. It may be that high-impulsivity participants would rely on the suite of stereotypes that disregard the seriousness of rape when behavioral manifestations do not meet a specific threshold (e.g., she was not hysterical; therefore, this is not a “real rape”). Future research should continue to examine impulsivity among police officers to disentangle its effect on officer attitudes surrounding crime victim behaviors, trauma manifestation, and other discretionary decision making.

Although these findings are instructive, they are not without limitations. First, although the trend design employed here used independent pre- and posttraining samples, responses from these two groups could not be linked due to human subjects’ protections and the anonymity of surveys. As a result, individual change over time and a causal relation between the effects of training on misperceptions of trauma could not be established. The surveys for the pre- and posttraining samples were also administered differently, with the pretraining survey occurring in a face-to-face setting, while the posttraining survey was administered online. As we found in this study, previous research has identified significant differences in response rates between in-person and web-based survey administration techniques (see Wells, Cavanaugh, Bouffard, & Nobles, 2012). These differences may reflect different motivations to complete the survey, which may account for some of the results

presented here. Those who completed the web-based survey may be more responsive to issues of gender-based violence and willing to spend the time completing a survey outside of their regular routine. Results should be interpreted accordingly.

Second, posttraining survey data were collected through a web-based administrator and yielded a response rate of 20% with a completion rate of 50%. This was after multiple contacts were made following Dillman et al.'s (2014) mail survey method to enhance response. This response rate aligns with previous studies that have employed online methods to survey law enforcement personnel (see Renzetti et al., 2015) and is comparable with online surveys administered without direct incentives (Couper, 2011). In both the web-based and in-person survey administrations, a sizable group of respondents did not complete all of the questions. Although efforts were made to be mindful of respondents' time and to create a survey that would take 10 to 15 min to complete, it is possible that fatigue played a role in non-completion. The in-person survey also occurred during role-call when officers may have felt pressured to complete it quickly to begin their workday. Although the response and completion rates may be indicative of general cynicism and police distrust toward researchers (although not necessarily related to nonresponse bias), best practices concerning police survey methodologies are still largely underdeveloped and warrant further consideration from scholars (see, for example, Nix et al., 2019). The present study, therefore, contributes to this narrow body of knowledge within police populations. Comparisons of the pre- and posttraining samples to population data on demographic information revealed statistically significant ($p < .05$), but not substantial, differences. For example, the average age of the pretraining sample, posttraining sample, 2016 population, and 2017 population was 38, 45, 50, and 48, respectively. Although demographic differences between groups were not substantial, results should still be interpreted with caution as they cannot generalize to the entire law enforcement population in this particular metropolitan agency. The present survey analyzed responses from police personnel in an urban police department in one of the five largest metropolitan cities in the United States. Future research should explore law enforcement misperceptions of trauma in rural and suburban departments or those with more homogeneous populations to determine (a) whether and to what degree officers endorse trauma misperceptions, and (b) how training may affect attributions among a diverse range of law enforcement personnel. Finally, it would be interesting to disentangle the interaction between the many factors considered in the present study as they may act as both predictors and outcomes in assessments of police-participant attributions, thus influencing response to gender violence.

The present study was the first of its kind to examine the role of victim-centered, trauma-informed training on police attributions related to behavioral manifestations presented by crime victims in the United States. Future research should continue to examine the ways that training may increase victim-centered interactions with police and justice system personnel, enhance victim cooperation, increase investigative efforts and suspect apprehension, and benefit case processing. In situations where law enforcement are provided with the most recent scientific information regarding trauma and the range of normal behavioral displays following sexual and family violence, every stakeholder has the potential to benefit.

Appendix

Beliefs About Crime Victim Behaviors (Ask, 2010).

Numbered items	Loading
2. A crime victim's reluctance to spontaneously give a detailed account of the crime is an indicator of the accuracy of his or her statements	.728
5. A crime victim who displays positive emotions (e.g., laughter, smiling) during his or her testimony is not likely to be telling the truth.	.687
1. A crime victim's display of emotions when recalling the crime is an indicator of the accuracy of his or her statements	.690
6. A crime victim's inability to report details about the event shortly after the crime (less than a day) is reason to question the accuracy of the statement	.683
7. Details that appear in a crime victim's memory after a period of time are less reliable than those the victim can remember and report right from the start.	.640
4. The fact that a crime victim's expressive style contradicts my expectations is generally reason to examine that statement's accuracy extra carefully.	.625
3. A crime victim who displays negative emotions (e.g., crying, despair, clear signs of distress) during his or her testimony is likely to be telling the truth.	.616
8. The reactions by crime victims to a violent crime differ between people with different cultural backgrounds.	-.026
9. The type of relationship between the crime victim and perpetrator influences the victim's emotional expressive style and behavior.	-.001

Note. Maximum likelihood estimation with unrotated factor solution. Bolded items were retained to create the final measure.

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ORCID iD

Cortney A. Franklin  <https://orcid.org/0000-0002-3997-5978>

Notes

1. This excludes Reserve Officers and Public Security Officers.
2. Although it would have been ideal to survey the entire population prior to training at this agency, the authors were bound by resource constraints and thus chose to implement a quasi-experimental design that employed a purposive sample of face-to-face surveys to facilitate increased response rates and maximize participation.
3. Individual police participants did not receive any incentive. Law enforcement legal counsel determined that any effort to incentivize participation through direct benefit (e.g., a drawing for something of value) was a conflict of interest.
4. For example, Franklin, Franklin, Nobles, and Kercher's (2012) peer-reviewed article reporting findings from an uncompensated web-based survey with a response rate of 5.24%—much lower than typical rates for mail-based surveys but not uncommon in online-facilitated questionnaires when participants do not receive direct incentive (Couper, 2011; Sheehan & McMillan, 1999).
5. Five cases had information for age and years of service that were mathematically impossible (e.g., "99 years old," "0 years old," "21 years old with 12 years of service," "86 years old with 33 years of service," and "2,728 years of experience").

6. The two samples are referred to as the pre- and posttraining samples throughout the article for ease of understanding, but this does not reflect a matched pre/post-test design.
7. Self-control has been employed in police samples to study deterrence and misconduct, although measures have been inconsistent and internal consistency reliability was either not reported (Pogarsky & Piquero, 2004) or was lower than has been typically recommended for latent scales (Donner & Jennings, 2014).
8. SPSS, version 22.0 was used to analyze the data. For each multi-item independent variable, scale scores were developed following exploratory factor analysis (EFA) with maximum likelihood estimation. Prior to estimating the statistical models, the data were screened for skewness and kurtosis. Estimates fell within the acceptable range and did not exceed recommended cutoff values of 3.0 and 8.0, respectively (Kline, 2005). Multicollinearity diagnostics were also evaluated; tolerances ranged from .432 to .897 and variance inflation factors (VIF) ranged from 1.115 to 2.316, indicating that multicollinearity was not a problem (Belsley, Kuh, & Welsch, 1980).

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Author Biographies

Cortney A. Franklin, PhD, is an associate professor in the Department of Criminal Justice and Criminology and director of the Crime Victims' Institute at Sam Houston State University. Her research focuses on violence against women, including sexual assault, intimate partner violence, perceptions of sex trafficking victims, and criminal justice system response to victims. She is the principal investigator for an Office of Violence Against Women grant to evaluate police responses to sexual and family violence. Her recent work has appeared in *Psychology of Women Quarterly*, *Criminal Justice and Behavior*, *Violence Against Women*, *Journal of Interpersonal Violence*, *Journal of School Violence*, and *Feminist Criminology*.

Alondra D. Garza, MA, is a first-year doctoral student in the Department of Criminal Justice and Criminology at Sam Houston State University. Her research interests include victimology, violence against women, and gender and crime. Her recent work has appeared or is forthcoming in *Journal of Interpersonal Violence* and *Criminal Justice and Behavior*. She is currently a graduate research assistant for a federally funded Office on Violence Against Women award to evaluate police responses to sexual and family violence.

Amanda Goodson, MA, is a doctoral candidate in the Department of Criminal Justice and Criminology at Sam Houston State University. Her research focuses on victimology, specifically violence against women, and system responses to crime victims. Her recent work has appeared or is forthcoming in *Criminal Justice and Behavior*, *Journal of Interpersonal Violence*, *American Journal of Criminal Justice*, *Journal of Crime and Justice*, and *Journal of Aggression, Conflict, and Peace Research*.

Leana Allen Bouffard, PhD, is professor and chair in the Department of Sociology at Iowa State University. Her research interests include life-course and developmental criminology, sexual assault and intimate partner violence, and criminal justice system response to violence against women. Her work has appeared in *Criminology*, *Justice Quarterly*, *Criminal Justice and Behavior*, and *Crime and Delinquency*, among others.