Guest editorial

Guest editor's introduction to this special issue on investigations

Despite the fact that law enforcement agencies in the USA dedicate considerable resources to investigations, their level of clearing serious crimes is low compared to previous years and to other industrialized Western democracies (Alexander and Wellford, 2017). In 2019, clearance rates in the USA were as follows: 61% for murders and nonnegligent manslaughters; 33% for rapes; 31% for robberies; 52% for aggravated assaults; 14% for burglaries; 18% for larceny-thefts and 14% for auto thefts (Federal Bureau of Investigation, 2020). Stated differently, out of 7,308,764 serious crimes reported to police in that year, 5,727,987 were not cleared (78%). This does not include the large number of crimes other than homicide that are not reported to police. By any measure law enforcement agencies in total are not doing as well as we should expect in solving crimes and bringing alleged offenders to consideration by our court systems [1]. Looked at over time, this situation is even worse. For example, we estimate that since 1980 there are 260,000 homicides and 15,000,000 aggravated assaults reported to police that have not been cleared [2].

Research since the 1990s and that presented in this special issue have focused on explaining why there are variations in clearances across cases and agencies. Most of this work has been on homicide cases. That work has informed the funding by the Bureau of Justice Assistance of the research based technical assistance provided by the Police Executive Research Forum and the National Police Foundation to agencies that wanted to improve homicide clearances [3]. This volume provides new work on homicide clearances but also expands the approach derived from that literature to other offenses, especially physical and sexual assaults.

Prior to the 1990s, the common wisdom in police studies was that police had little to do with crime clearance. The studies by RAND in the 1970s were interpreted by many (inaccurately as we explain in our paper in this volume) as finding that police did little to contribute to the clearance of crime. Prominent commentators (e.g. Bayley, 1994) went so far as to conclude that the police played no role in clearances. Some research prior to the 1990s that seemed to find a stronger role for police in crime resolution in fact argued that police should seek to identify the cases they could solve and ignore the rest (c.f., Eck, 1983); a position that assumes case characteristics largely explain clearance and is only slightly different from the position that police do not matter. Research since then has, at least for homicides, found that police can through organization, resource, personnel, training and investigative practices improve clearances of all types of homicide (Braga and Dusseault, 2018; Braga *et al.*, 2019; Brookman *et al.*, 2019; Pizarro *et al.*, 2020; Wellford *et al.*, 2019). Not only do police matter but they are also the most easily manipulated set of variables in a comprehensive model of homicide clearance. While we know this for homicides, we do not know if this conclusion applies to other types of serious crime. Papers in this issue address that situation.

Using the homicide clearance research literature as a guide, we suggest a model for crime clearances and a methodological design to use in studying the clearance of other serious crimes [4]. From the homicide literature, we have good evidence that clearances are related to the characteristics of the case, the investigative activities and resources applied to a case, how an agency is organized to conduct investigations and how well the community cooperates

with police during investigations. To improve investigations of other types of crime, we will need to understand how this cluster of factors can be manipulated to raise clearance levels. To do this, the study of the clearance of serious offenses must include designs that involve multiple agencies that vary in their levels of clearance, access to open and closed case files, the ability to interview all those involved in the investigation and an understanding of why communities differ in their willingness to assist police during their investigations. Designs that only address some of these factors and/or use only automated case files for their data will generate estimates of factor influences that are at best suggestive of useful findings, since they omit predictive variables related to investigation activities and organizational attributes.

Of course, we have not yet addressed a critical issue in the clearance literature – why are improved clearance rates important [5]. Obviously, victims and their families and friends and members of the community want to know who has committed serious crimes and why they did it. Sometimes this is often expressed as a call for justice. In addition, we think that improved crime clearances *may* be associated with less crime, fewer acts of retaliation and greater support for law enforcement. Finally, there *may* be benefits to police agencies, including improved morale and more professionalism in investigative units. We emphasize *may* because none of these questions have been adequately researched. We hope that future work will give greater consideration to the outcomes of improved clearance rates.

Still, there is good reason to anticipate these positive effects. For example, we know that perceptions of risk punishment are negatively correlated with offending behavior; we also know, but with less certainty, that risk perceptions are positively related to the real risk of apprehension (Barnum *et al.*, 2021). Therefore, if the risk of apprehension increases to some threshold level, then perceptions of risk should increase and crime should decrease – a set of conditions consistent with deterrence theory which places certainty of apprehension above severity in preventing crime. Also, we know that retaliatory homicides are real and not infrequent (Kubrin and Weitzer, 2003). Almost all of these incidents are preceded by other crimes (Dobash *et al.*, 2007). Reducing assaults, robberies, thefts and sexual assaults should lead to fewer of these types of homicides. Finally, we suspect that when police agencies clear serious crimes at high levels, the community realizes this and provides more assistance to police investigations and gains greater appreciation for the agency. In addition to more and better research on investigations, we need research on the consequences of such improvement.

Lastly, we focus on clearance because the primary purpose of an investigation has always been to solve the crime. We note that this is not the only purpose; others include serving crime victims and crime prevention. Research has and should continue to study these outcomes in addition to the likelihood of arrest. As seen in this issue, other important topics for research on investigations include developing evidence-based tools that departments can use to improve their effectiveness and efficiency in investigating cases, identifying effective investigation practices and technologies, especially for handling new challenges like the availability of digital and audiovisual evidence, and identifying ways to reduce gender, racial and other biases among officers. This special issue includes research studies that address a diverse set of research questions on investigations and their outcomes that we believe serves as a useful guide to policing researchers on fruitful directions for future research on investigations.

Papers in this issue

The subject of 5 of the 11 manuscripts in this issue is the explanation of investigative outcomes through multi-variable regression analysis. In the first article, Goodison (2021) tests a simple but surprisingly under-researched question: ceteris paribus, do more years of detective experience in law enforcement and/or investigations increase a detective's likelihood of solving a homicide? Using information from incident case files to control for features of the case and leveraging the random nature of homicide case assignment to detectives, Goodison (2021)

regresses case clearance on years as a homicide detective, years as a district detective, years as a patrol unit and years as an officer in the department. Surprisingly, although he found a positive relationship between case clearance and years in the department, he found a statistically significant negative relationship with years as a homicide detective. As he notes, these results call for future research to both replicate these findings and explain the mechanisms linking experience to investigation outcomes. Ideally, this research would use multi-level modeling to explain how much variation in clearance outcomes is within detective as compared to between detective and what role detective experience plays in case outcomes.

Scott and Wellford (2021) describe a multi-site analysis of the predictors of aggravated assault clearance. In a multi-variable logistic regression, they test the hypothesis that investigative and agency factors matter in clearance. They find that among the statistically significant relationships, investigative effort is negatively related to the likelihood of case clearance, which they contend is likely due to the relationship between case solvability and detective effort. Furthermore, the authors replicate previous findings on homicide investigations by showing that attributes of the investigative unit and department both relate to aggravated assault clearance rates and condition the relationships between investigative activities and the likelihood of case clearance.

In the next paper, Barao et al. (2021) build on their previous work by examining the investigations of gang- and drug-related nonfatal shootings as compared to other nonfatal shootings and similar gang- and drug-related fatal shootings. Their results show how few of these crimes are cleared by the police and that agencies could improve their clearance rate for these incidents by investing more in the resources and effort that are applied to their investigations.

Crucially, Goodison (2021), Scott and Wellford (2021) and Barao and colleagues (2021) point out the lack of evidence that could inform their research questions and situate their findings. Unfortunately, there is little empirical research on the effect that detective experience has on investigation outcomes and on investigative effort and its impact on case clearance in offenses other than homicide. To provide law enforcement agencies with evidence-based solutions for improving clearance rates, policing researchers must replicate and test the generalizability of these findings. This will require partnerships with law enforcement agencies to access agency data and personnel and to implement and evaluate promising interventions. Research could also build on these studies by identifying the mechanisms driving main effects and by understanding variation in investigator and investigative supervisor decision-making during investigations.

The next set of multi-variable studies examines sexual and domestic assaults. In the first study, Markey et al. (2021) present results from several analyses of hundreds of adult sexual assaults that were investigated in five law enforcement agencies. They replicate previous studies showing that (1) few reported sexual assaults result in an arrest, (2) few cases involve much evidence and (3) evidence collection is positively associated with the likelihood of arrest. They also find that investigative effort, which they show is lacking in many cases, increases the odds of an arrest.

In the second study, Bostaph et al. (2021) analyze 199 domestic assaults and 171 sexual assaults reported to a medium-sized police department to describe how investigators' perceptions of victim credibility relate to investigation activities and outcomes. In doing so, they measure and test constructs from the Department of Justice's Gender Bias Principles, being the first to do so. Among their many findings, they show that victim credibility is positively associated with the likelihood of a suspect's arrest and the likelihood that law enforcement refers the case for prosecution. Together, these two studies show that investigative supervisors must attend to both what investigators do and how they do it to improve the quality of sexual assault and other investigations in their department.

The next two articles in this issue discuss the development of prediction tools to guide investigator decision-making. These tools improve departments' return on investment from investigations by prioritizing cases for investigation that are more likely to result in a positive outcome. In the first study, Mount *et al*. (2021) present the results of a study they conducted with the Australian Federal Police to develop a better assessment tool for prioritizing child abuse material tips for investigation. Similarly, in the next study, McFadzien and Sherman (2021) describe the effectiveness of an assessment tool that they developed with the Kent Police to prioritize more solvable minor assault and public order crimes for investigation. The authors show that the tool is incredibly accurate at determining when a case will not be solved and can therefore be used to screen out "unsolvable" cases to make detectives more effective. They also explain the importance of monitoring the accuracy of assessment tools over time. Although detectives must work hard to investigate every crime they can, and law enforcement agencies must problem solve when resources are limited, for some offenses, departments receive too many tips and crime reports to thoroughly investigate. In these instances, the research conducted by Mount and colleagues (2021) and McFadzien and Sherman (2021) provides important guidance to law enforcement about how to work with scientists to develop assessment tools to guide agency decision-making.

The next pair of articles describes different approaches for advancing how investigators use digital and audiovisual evidence to solve crime. In the first article, Cook and Berglund (2021) describe the implementation of Area Technology Centers in the Chicago Police Department to improve the department's ability to analyze digital and audiovisual evidence. The centers employ trained staff to assist detectives who investigate homicides and nonfatal shootings with recovering and analyzing this type of evidence. In the next article, Wilson-Kovacs (2021) presents results from her qualitative study of the introduction of digital media investigators into four police forces in England in 2015. These investigators are trained in digital evidence collection, preservation and processing and operate in local police forces. Wilson-Kovacs (2021) describes issues surrounding the adoption and recruitment of these investigators, their organization and activities, their impact on investigations and more. Together, these studies provide unique solutions to the need in law enforcement to collect and analyze digital and audiovisual evidence more consistently. Future research should include process and outcome evaluations to determine if certain models, practices and trainings for investigating digital evidence are better than others and to answer other empirical questions about how to investigate this type of evidence most effectively, including which offense types should be prioritized.

Finally, the articles by Prince *et al*. (2021) and Innes *et al*. (2021) provide readers with context on the investigations' evidence base and how investigations unfold in practice. First, Prince *et al*. (2021) organize the extant empirical research on investigations into seven different research categories and discuss what we have learned and what we still do not know about investigation practices and outcomes. Among their findings, they point out that research is increasingly showing that investigator actions, unit and department organizational characteristics, and new technologies can improve investigative outcomes like arrest rates. They note that multi-site outcome evaluations are needed to identify best practices. Next, in their manuscript on investigative "mosaicking", Innes *et al*. (2021) describe what investigations look like in practice. Their mixed-methods study of 44 homicide investigations across four police departments revealed that detectives assemble and scrutinize various combinations of information and evidence, depending on the nature of the case. This description demonstrates the complexity and varied nature of investigations, which researchers must remember when exploring relationships between investigative actions and outcomes. Together, these final two manuscripts show the value of studying law enforcement investigations using both quantitative and qualitative methods.

Concluding thoughts

This is a pressing time for law enforcement leaders and policymakers, who need evidence to guide decision-making. Although much of the nation's focus in 2020 and 2021 has been on rising crime rates, clearance rates are dropping and in some large cities are shockingly low, even for serious crimes, like shootings. Devastatingly, this means a considerable lack of justice for victims and their families as well as accountability for criminal offenders. Although more research is needed on the link between clearance rates and crime rates, evidence suggests that less offender accountability will translate to more crime due to a lack of deterrence and selective incapacitation and an increase in self-policing. To an extent, law enforcement agencies can act as their own saviors if they are willing to critically evaluate their organization and operations and work with social scientists to test promising practices, even if this involves sharing agency data, reorganizing and/or shifting resources. The Department of Justice and private foundations can also play a role by shifting grant funding from patrol-based crime prevention to investigation-based crime reduction. Although we do not doubt the value of preventing crime to reduce harm and improve the criminal justice system's efficiency, the lack of funding for research on investigations limits law enforcement's potential to reduce repeat offending through the mechanisms we just described. Finally, law enforcement researchers must work together to conduct multi-site studies and to replicate prior work. By better organizing investigations research, social scientists can better utilize limited funding opportunities to move the needle on the identification of best practices in investigations. In sum, at a time when evidence is badly needed to guide practice, the investigations' evidence base is too small to provide science-based solutions, and law enforcement, funders and researchers must work together to change that situation. This special issue seeks to expand that research base and set a path forward for future research on this critical topic.

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Notes

1. As papers in this issue demonstrate the variation between agencies in clearing serious crime is substantial. These estimates simply describe the total clearance rates.

2. The numbers are obviously greater for most other index offenses. Rape was and still is so underreported that we do not offer estimates for that crime.

3. See Police Executive Research Forum (2018).

4. In doing so we do not use existing resources allocated to investigations of crimes other than homicide as a limitation on what police can achieve. Undoubtedly, improvements in clearing other serious crimes will require the allocation of new resources for investigations.

5. In speaking of clearances throughout this issue, we mean to include clearances that are achieved legally and justly. Too often clearances and convictions have not met these standards.

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