REDESIGN OF THE NCVS

Second Major Redesign of the National Crime Victimization Survey (NCVS)

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Research Summary

Since 1973, the National Crime Victimization Survey (NCVS) has served as a key source of data on the level and nature of crime and its consequences. Tokeep pace with the changing landscape of crime, as well as with the technological advances in survey research, occasional "redesigns" of the survey are necessary to modernize and improve the utility of data collected.

Policy Implications

This article describes recent and ongoing efforts to redesign (a) the NCVS survey instruments to refect the changing demographics of victims, emerging crime types, and timely issues related to victimization risk and victim responses to crime and (b) the NCVS sample to generate state and local estimates of crime. The implications of these improvements for researchers and policy makers are discussed.

he National Crime Victimization Survey (NCVS) is a major source of crime statistics and of data for the analysis of victimization risk, consequences of victimization, and responses to crime. The survey has been ongoing since 1973, resulting in a

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long series of annual estimates of crime through use of its reasonably consistent methodology (Baumer and Lauritsen, 2010; Biderman and Lynch, 1991; Lynch, 1990). As such, we are provided with an important picture of long- and short-term changes in the crime problem and society's responses to it. At the same time, the survey has been continuously changed to keep pace with fuctuations in budgets, demands for information, and emerging technology. Episodically, resources have become available to undertake more extensive research and development for the survey and to make changes that cannot be accommodated within typical budget constraints. The ideas and information generated during these "redesigns" result in changes to the design and content of the survey that are gradually introduced into the survey over several years to preserve the quality of the data and the time series, as well as to keep the survey abreast of changes in crime and reactions to crime. This article begins by briefy discussing the contributions of prior NCVS redesigns before focusing on the latest redesign of the survey and the benefts that these changes bring for crime statistics, as well as for the analysis of victimization risk and responses to victimization.

Unique Contribution of Victimization Surveys to Crime Statistics

The demand for and the value of victimization surveys resides in their independence from offcial police statistics, the ability to capture the hidden or "dark fgure" of unreported crime, and the fact that they are a unique source of information on rarely reported incident outcomes. The victim's perspective is free from the social and bureaucratic filters affecting offcial records (Biderman and Reiss, 1967). Furthermore, although 18,000 local law enforcement agencies attend to local laws and policies in recording crimes, national surveys allow for greater standardization of data collection. Theoretically, the NCVS records and classifes a victim who experiences a violent assault with a weapon by a 17-year-old in the same manner regardless of whether the victim resides in Syracuse, St. Louis, or San Diego. In addition, crime surveys offer comparable data on victims and nonvictims that facilitates risk analysis, whereas police administrative records by themselves do not.

The hidden fgure of crime not reported to the police severely limits the use of police statistics for understanding the magnitude of crime, and introduces a potential distortion into our understanding of who is at risk for victimization. This hidden fgure constitutes a substantial proportion of crime, particularly among many of the crimes of most concern to the public. Overall, approximately half of serious violent crime—rape, robbery, and aggravated assault—goes unreported to law enforcement with just 1 in 3 rape victims, 2 in 3 intimate partner victims, and 2 in 3 victims of frearm violence reporting their victimizations (Planty and Truman, 2013; Truman and Langton, 2015). Additionally, certain victims may be less likely to report to police. The gay and lesbian community, undocumented residents, and other vulnerable populations, for example, may be less likely to seek help after an experience out of fear of retribution. This selectivity can bias the description and understanding of these crime events.

Understanding why victims do not report to the police is another key feature of victimization surveys. Nearly 40% of unreported intimate partner violence has been attributed to victims not reporting out of fear of reprisal or getting the offender in trouble (Langton, Berzofsky, Krebs, and Smiley-McDonald, 2012). Fear of reprisal should be of concern to any law enforcement executive as it suggests a perceived inability of police to break the cycle of violence and protect potential victims. Relatedly, we know from the responses to victim surveys that less than 10% of victims of serious crime receive the formal victim services that could assist with preventing future victimization. Moreover, only approximately 15% of victims of serious violent crime resulting in signifcant injury reported receiving victim services even though the availability of federal and local resources for monetary compensation and direct services has grown to substantial levels over the past 10 years (Langton, 2011). Data from victim surveys also reveal an association between reporting to the police and receiving victim services often because reporting is a qualifying precursor to access to such resources and because victims who receive services are more likely to receive follow-up from the criminal justice system including contact from prosecutor, signed complaint, and the offender arrested. The responses to these surveys provide an opportunity to understand why certain victims seek and receive services when others do not.

The use of victim surveys provides a critical source for reliable information on the consequences or harm associated with the crime event. Crimes like domestic and intimate partner violence, rape and sexual assault, and identity theft can have a significant toll on victims that goes beyond the traditionally recognized medical and financial losses. For instance, an estimated 70% of victims of serious violence reported experiencing significant socioemotional distress associated with the victimization (Langton and Truman, 2014). Socioemotional impacts, including the effects of crime on work and school and relationships, could not be feasibly assessed through police administrative data. Additionally, the fact that the survey can follow some victims over time allows for the study of whether responses to victimization result in increases or decreases in subsequent victimization (Xie and Lynch, 2016).

Furthermore, use of the surveys offers a convenient opportunity to measure the performance of public organizations by assessing outcomes rather than outputs. Victims can provide information on their satisfaction with police response and with victim services. In the 21st Century Policing Task Force Report (President's Task Force on 21st Century Policing, 2015a, 2015b), the use of surveys is called for to track the level of residents' trust in their communities. These surveys can be used to tap other measures of crime including perceptions of fear and safety, thus, presenting a more complete picture of community well-being.

Redesigns and the Evolution of Crime Surveys

During the past 43 years, major, episodic redesigns of the NCVS, in addition to less dramatic, but more incremental, minor changes, have been implemented to try to keep pace with the

changing demands on our crime statistics system. The frst major redesign of the survey was aimed at improving the accuracy and completeness of the data provided by victims with lesser emphasis on increasing the amount of information available to understand victimization risk (Biderman, Cantor, Lynch, and Martin, 1986). This emphasis was in keeping with the recommendations of the National Academy of Science (NAS; Penick and Owens, 1976) and the validation demands on the survey—if the NCVS is the standard to which the police data would be compared, it must be as good as the methodology allowed. In the frst redesign, a new and different screening procedure was introduced that substantially improved the completeness with which respondents recounted their victimizations (Biderman et al., 1986; Kindermann, Lynch, and Cantor, 1997). The information content of the survey was improved by modest changes to the incident form (Lynch, 1990) and by keeping the content of the core survey constant but adding supplements that would ask respondents about new types of crime or get additional information on crime already included in the survey. This core and supplement approach had been used to good ends in the British Crime Survey (BCS), but it remained to be demonstrated that the same could be done with the NCVS without damage to the time series. This demonstration occurred during the 1992 redesign and the use of supplements grew rapidly thereafter, introducing new crimes into the survey and more information about the old (Durose, Greenfeld, Langan, Levin, and Smith, 2001; Harlow, 2005; Kaufmann et al., 2000). Much of the proceeds of the frst redesign were introduced into the ongoing NCVS in 1992.

In the following sections, we describe the research and development activities undertaken as part of the second major redesign and suggest how they may be of use to both practitioners and researchers.

Second Redesign of the NCVS

The current redesign involves two major components, a multiyear redesign of the NCVS survey instrument content and a redesign of the sample and estimation techniques to allow for subnational estimation. Together, these components are aimed at assessing new types of crime, understanding victimization risk, expanding information on our responses to crime, and providing all of this information on both a national and a subnational level.

NCVS Instrumentation Redesign and Testing Project

Through this project,² the principal aims of the Bureau of Justice Statistics (BJS) are to evaluate and modernize the organization and content of the NCVS instruments (control card; NCVS-1 Crime Screener; and NCVS-2 Crime Incident Report). The project is multiyear and multistaged, involving detailed assessment of the utility of current content;

A cooperative agreement was competitively awarded to Westat (Rockville, MD), a nationally recognized survey research and data collection organization, to assist BJS with the development, design, and testing of the redesigned NCVS.

the use of a technical review panel (TRP) to assist in the nomination of new material for inclusion and revisions to existing content; extensive cognitive testing of new and revised content; a large-scale, two-wave feld test of the revised instrument and mode; and the development of recommendations for the offcial introduction of the new instrument into the feld. The TRP includes members from BJS, Westat, and the U.S. Census Bureau, as well as a wide range of representation from federal partners, researchers, and practitioners from the felds of criminology, domestic and intimate partner violence, victim services, and policing.

The frst proposed change in the instrument would expand the scope of crimes covered by the survey to include new and emerging crimes, particularly those, like stalking, identity theft, and fraud, that are unlikely to be reported to police. The second would improve the measurement of existing crimes, specifcally sexual violence, domestic violence, and intimate partner violence. These improvements are aimed at enhancing recall through more detailed cueing strategies and increases in respondent privacy. The third proposed change would improve the capacity to assess victimization risk, particularly through the inclusion of social and demographic correlates of victimization that are either not typically available in police statistics or other national sources of data or are not easily available for both victims and nonvictims. Each of these major areas of redesign is intended to respond to noted shortcomings in national data on crime and victimization and is described in greater detail in the following sections (Groves and Cork, 2008).

Expanding Scope and Improving Measurement

Adding new NCVS crimes. The NCVS was initially developed to assess the extent to which law enforcement statistics collected through the Uniform Crime Reports (UCR) program accurately refected the level of, and change in the level of, crime. To serve this purpose, the scope of crimes included in the survey must overlap substantially with that of the UCR. As a result, the NCVS as it is today refects the focus on street crime that has long been the principal concern of local law enforcement. The current survey was essentially designed to capture the UCR index crimes—rape, robbery, physical assault, burglary, larceny, and motor vehicle theft—through the core survey instrument, and supplements are used to collect information on a periodic basis about crime types such as identity theft and stalking. Other emerging crimes like financial fraud are not measured by the survey at all. As noted by a National Academies of Sciences (NAS) panel in 2016, "The lack of systematic information about non-street crimes makes it very diffcult to develop sound judgments about whether adequate resources are being devoted to these types of problems" (National Academies of Sciences, Engineering and Medicine, 2016: 10).

Thus, one goal of the redesign is to increase the scope of crime covered in the NCVS. In the short term, this goal can be accomplished by using the current core-supplement design of the NCVS to collect much needed data on crimes like stalking, identity theft, and fnancial fraud on a periodic basis. In the longer term, BJS is considering options for

a modular design, like that used in the Crime Survey of England and Wales (Offce for National Statistics, 2015).³ Modules are short sections focused on topical areas administered to a representative subsample of respondents throughout the collection cycle. This approach allows for the continuous, or at least more routine, collection of data on these crime types and for improving the fexibility of the survey to be able to address emerging types of crime while controlling burden.

The development of supplements to measure stalking, fraud, and identity theft represents an important expansion for the NCVS. Each of these crime types is at least as prevalent as violent crime, with the prevalence of identity theft far surpassing that of violent victimization (Harrell, 2015; Harrell and Langton, 2013; Truman and Langton, 2015), and the same result is expected for financial fraud (Beals, 2014). To date, the identity theft supplement has been administered four times, most recently in 2016; the stalking supplement has been administered only two times—once in 2006 and once, after significant redesign, in 2016—and financial fraud has not been measured previously in the NCVS. The measurement of each of these crime types poses challenges, but there is demand for the data among stakeholders and particular interest in developing a survey infrastructure that would eventually allow for subnational estimates of these types of victimization.

Data from the NCVS Identity Theft Supplement reveal that losses attributed to identity theft total more than for all other property crimes captured by the NCVS and that for some victims, the emotional distress associated with identity theft reaches the levels of distress experienced by violent crime victims (Harrell, 2015; Harrell and Langton, 2013). With the administration of the 2016 Identity Theft Supplement, the supplement has now been conducted three times in its current form, allowing for the assessment of changes in the prevalence and nature of identity theft victimization during a 6-year period.

A revised and improved supplement to measure stalking was also administered in 2016. The 2016 version was modified to refect changes in the legal definition of stalking and in the use of technology in the commission of stalking since 2006. In the short term, the 2016 data will allow for estimation of the prevalence of stalking for persons 16 years of age or older in the United States, as well as for better measurement of the types of stalking behaviors experienced by respondents, specifically stalking with technology. In the longer term, the more routine collection of data on this type of crime will allow for better analysis of changes in the prevalence and nature of stalking.

The development of the first NCVS fraud supplement is currently underway. Part of the challenge in accurately measuring the prevalence of fraud has been the lack of a clear definition for the term "fraud." Depending on the definition used, the results of extant research reveal that between 4% and 17% of the U.S. adult population experienced fraud during a 1-year period (Beals, 2014). To address the need for a fraud classification system

This survey was formerly the British Crime Survey (BCS).

and as the frst step in the development of an NCVS fraud supplement, the Financial Fraud Research Center, a joint project of the Stanford Center on Longevity and the FINRA Investor Education Foundation (FINRA Foundation), collaborated with BJS to develop a standardized fraud classification scheme. The resulting taxonomy, which was vetted and tested by a panel of fraud experts and practitioners, provides the definitional framework for the development of the NCVS supplemental survey instrument (Beals, DeLiema, and Deevy, 2015). That instrument is currently undergoing additional testing with a goal of administering the frst NCVS fraud supplement in 2018.

Although the short-term development of these supplements represents important steps in better understanding the changing nature of crime problems in our country, this is only a frst step. The ultimate goal is to ensure not only that the redesigned NCVS will capture these important crime types on a routine basis but also that the survey has the ability and fexibility to go beyond the addition of these offense types to capture routinely other emerging crimes as society and the criminal justice system continue to evolve.

Improving measurement of long-standing NCVS crimes. Numerous challenges exist in the collection of self-report data on rape and sexual assault, and these estimates can be greatly impacted by definitional and methodological decisions (Fisher, 2009; Fisher and Cullen, 2000; Fisher, Cullen, and Turner, 2000; Koss, 1996; Koss, Gidycz, and Wisniewski, 1987). As a result, wide variation exists in estimates of the level, and the change in level, of rape and sexual assault. A report from the Government Accountability Offce (GAO) identifed 10 different efforts across the federal government aimed at collecting data on sexual violence but using different target populations, terminology, measurements, and methodologies (GAO, 2016). The offcial estimates of these crimes based on NCVS data have typically been lower than estimates obtained from surveys by other federal agencies and by private groups.

Nevertheless, the measurement challenges do not detract from the importance of understanding the nature and consequences of this type of victimization. Research findings have shown that experiences of rape and sexual assault can have long-term effects on victims, ranging from unwanted pregnancies to contracting sexually transmitted diseases, to developing eating disorders, anxiety, depression, and posttraumatic stress disorder (Walters, Chen, and Breiding, 2013). These crimes are also among the least likely to be reported to police (Truman and Morgan, 2016). BJS's 2011 charge to an expert panel from the National Research Council's Committee on National Statistics (CNSTAT) to take up the issue of measuring rape and sexual assault noted that these offenses "remain the darkest of the 'dark fgure' of crime" (Bureau of Justice Statistics, n.d.: para. 1). Although many definitions and survey designs have been used to measure rape and sexual assault, there has been almost no actual testing of the relative performance of these designs.

In recent years, BJS has undertaken several efforts to understand better the conceptual and methodological issues surrounding survey statistics on rape and sexual assault and to inform the NCVS redesign efforts. In June 2011, the CNSTAT panel convened and began its mission to consider a wide range of alternative self-report survey designs to measure

the incidence and prevalence of rape and sexual assault and to recommend to BJS the best methods for obtaining such statistics on an ongoing basis. Several months later, BJS made a competitive award to Westat to develop and test two different survey designs for collecting self-report data on rape and sexual assault. The estimates from these two designs are being compared with data from the NCVS to assess the impact of survey methodology, mode, context, and question wording on estimates of rape and sexual assault victimization. The findings from this effort are expected to be released in 2017 and will be used to inform the ongoing instrument redesign efforts.

Additionally, in 2015, BJS conducted the Campus Climate Survey Validation Study (CCSVS) with a sample of approximately 23,000 undergraduate students at nine post-secondary schools (Krebs et al., 2016). The purpose of the study was to develop and test a survey instrument and methodology for effciently collecting valid school-level data on campus climate and sexual violence. It also was intended to help inform BJS efforts associated with measuring rape and sexual assault among a high-risk population, with the use of Web-based self-administered survey modes for measuring sensitive topics related to criminal victimization, and with assessing the impact of the context of the survey, privacy, and use of behaviorally specific questions on prevalence and incidence rates.

Although the fndings from the CCSVS are not nationally representative, comparison with the NCVS sample of 18- to 24-year-old female students revealed estimates of the incidence of rape and sexual assault that were significantly higher among the CCSVS sample compared with the NCVS. The fndings indicate that CCSVS may have resulted in higher rates of victimization as a result of a combination of the expansion of the scope of behaviors asked about in the survey, the inclusion of explicit questions about incidents involving incapacitation, the use of behaviorally specific questions, and the privacy afforded by a self-administered Web survey. These considerations are being taken into account in the development of new NCVS screening items and considerations about mode and the use of ACASI or Web-based approaches to asking about highly sensitive crime types.

As with sexual violence, measures of domestic and intimate-partner violence are prone to underreporting if respondents are not cued appropriately or not afforded a private interview setting. Although the 1992 redesign effort resulted in substantial improvements to the measurement of nonstranger victimizations by specifcally cueing on family and intimate partner violence (Kindermann et al., 1997), additional improvements to the data collection process can result in more valid responses. Specifcally, the use of a self-administered instrument through Web-based or smartphone technology is an option that allows respondents to answer questions when they feel they are most comfortable and safe, and redesign efforts are aimed at considering the use of these types of newer technologies for the NCVS. Other improvements are focused on how relationships are measured. Younger persons are likely to classify intimate relationships differently than older cohorts. For example, a victim may aptly define a short-term romantic partner as an acquaintance, friend, or even stranger, missing

the intimate nature of the relationship. Subsequently, this could lead to an underestimation of the level of intimate-partner violence for some subgroups.

Correlates of Crime and New Demographic Items

Although several correlates of crime—from individual measures and activities to community measures—are being considered for inclusion in the redesigned NCVS, BJS also recognized that important near-term changes in the sociodemographic information collected about respondents could improve the relevance and utility of the NCVS quickly and without affecting the victimization rates. Beginning in July 2016, several sociodemographics items were added to or modifed in the NCVS. For the modifications, BJS moved existing questions on disability status from the Crime Incident Report (CIR), where they were only asked of victims, to the demographic section, where they are now asked of all respondents at every other interview wave, to provide a denominator of persons with a disability. This modification will allow for a better assessment of how disability contributes to the risk of victimization. Additionally, response categories for the question on household income were expanded from the previous cap of "\$75,000 or more" up to "\$200,000 or more" to allow for more accurate assessment of a household's economic well-being.

Beyond these important but non-rate-affecting modifications, several new items were also added to the survey to measure veteran status, citizenship, sexual orientation, and gender identity. These statuses have been identified by researchers and policy makers as factors affecting victimization risk, but the nature, source, and direction of risk for these groups are not well estimated or understood. Veterans, for example, are often assumed to be prone to violent offending because of the trauma experienced as part of their service (Lapp et al., 2005). Knowing the veteran status of all members of the household in the NCVS will be useful in determining whether having a veteran in a household affects the risk of domestic violence in the household. On the fip side, some evidence suggests that veterans have been targets for crimes like identity theft (Williams, 2013) and that disabilities resulting from veteran status can also affect one's ability to protect one's self and increase a veteran's vulnerability to violence and other forms of abuse. Similarly, although few national surveys have been used to measure the social and economic well-being of the lesbian, gay, bisexual, and transgender (LGBT) population, research findings have shown that LGBT persons are at risk of experiencing certain types of victimization at equal or higher rates as heterosexual persons (Krebs et al., 2016; National Coalition of Anti-Violence Programs, 2015; Walters et al., 2013). The addition of these new demographic measures to the survey will allow for assessment of their association with victimization.

Furthermore, these measures allow for the identification and examination of groups that have been identified as populations historically underserved by criminal justice agencies. In recent years, sexual orientation and gender identity became protected statuses under federal hate crime legislation (18 U.S. Code § 249, Hate Crime Acts, 2009), and the 2013 reauthorized Violence Against Women Act (VAWA) included language to prohibit

discrimination in the administration of victim services as a result of actual or perceived LGBT status. Nevertheless, the inclusion of gender identity on the NCVS in 2016 marks the frst time a national household survey has been used to collect such data. Without this quantitative, nationwide data, it is impossible to ascertain whether conditions have improved for these historically underserved groups.

There are other policy-relevant needs for the inclusion of sexual orientation and gender identity, in particular, on the NCVS. For instance, in the President's Task Force on 21st Century Policing (2015b) Interim Report, the need to examine the relationship between LGBT status and the measures collected through the NCVS Police Public Contact Survey on the nature of police contacts and the perceived fairness and legitimacy with which they are carried out is highlighted. The inclusion of these demographic variables on the NCVS opens up the possibility of examining this relationship.

Although the inclusion of these new measures opens the door for research into understanding the nature and sources of victimization risk and the criminal justice response to victimization for these groups, the expansion of research opportunities need not depend exclusively on changes in the information content of the NCVS. Opportunities can be further expanded by linking the NCVS person and household data to other U.S. Census data collections at various levels of geography through the area identifed NCVS available in census research data centers (RDCs). For example, census tract data from the American Community Survey (ACS) can be used to characterize the social disorganization of neighborhoods that, in turn, can be used in modeling victimization risk. This ability to link NCVS incident, person, and household data to attributes characterizing the ecological context of crime substantially increases the range of available crime correlates.

Perceptions of Police and Police Response to Crime

Victimization surveys are an important and underused source of information on the police and on public perceptions of the police. They can be used to assess police department performance and serve as a gauge of police-community relations (Beck, Boni, and Packer, 1999; Skogan, 1975, 1996). For many years, the NCVS asked victims only a few questions regarding the police-mainly whether victims called the police in response to their victimization and why they called or did not call. In 1986, as a result of the frst redesign, additional items were added to the incident form asking victims to report on whether the police responded to their call and what they did when they came and afterward. Despite this change, however, respondents are not asked to evaluate their interactions with police.

With crime rates at an all-time low and the use of social media at an all-time high, there is renewed interest in the civility of the police, in police-resident interactions, and in the

The report in Action Item 2.13.1 stated that, "The Bureau of Justice Statistics should add questions concerning sexual harassment of and misconduct toward LGBTQ and gender-nonconforming people by law enforcement officers to the Police Public Contact Survey" (p. 28).

process by which these encounters infuence perceptions of the police in the broader public. With support and interest from infuential police executives, BJS is working to expand the survey in two key ways: (1) adding questions that could be administered to both nonvictims and victims to understand better their perceptions of police, and (2) adding items that would ask victims to evaluate their recent contacts with police and report on both negative and positive police actions.

To address the frst goal, BJS is developing a series of questions to be administered to all respondents (victims and nonvictims) in an attempt to measure residents' perceptions of police and understand better the local area context within which victimizations occur. The measures follow from procedural justice theory (Lind and Tyler, 1988; Tyler and Huo, 2002), which is used to identify a direct relationship between perceptions of the police and positive criminal-justice—related outcomes, including reporting to police, cooperation with police, and reduced levels of offending. The measures are being designed with an eye toward capturing the key dimension of procedural justice, including perceptions of police trust, respect, fairness, and legitimacy, as well as including perceptions of police effectiveness.

These new questions have two objectives. One is to reduce "topic salience bias," which is the tendency of respondents to be more likely to respond to a survey when they have interest in and experience with a topic. One goal for including the noncrime questions at the beginning of the survey is to increase the likelihood that respondents who have not experienced a victimization will participate. Currently, the NCVS results in identifying one victim for every ten households, causing attrition in later interview waves and some respondents refusing to complete interviews two through seven because they have no victimizations to discuss. This can result in coverage error that potentially leads to biased estimates of magnitude and risk. Asking respondents about safety or police performance in their communities may resonate with their concerns, encourage them to respond, and prevent attrition. These questions essentially serve as a "hook" that encourages them to participate in the survey. Additionally, these data on perceptions of police have value to local areas above and beyond the crime context.

The second goal of this new set of questions asked of all respondents is to develop a more comprehensive set of indicators of community well-being beyond the traditionally used homicide and violent crime rates. Communities and their residents may face other quality-of-life issues or have increased perceptions of fear and concerns about safety. The use of victim surveys affords the opportunity to tap these measures and to understand how victims and nonvictims, as well as other key subgroups, differ in their perceptions.

In 2012, BJS convened a Crime Indicators Working Group (CIWG) of law enforcement practitioners and researchers tasked with developing a new framework of crime indicators that could be used for understanding crime within the jurisdictional context and allow for cross-jurisdictional comparisons. The CIWG noted that residents' perceptions of police are an important measure of community well-being that can only be obtained through surveys of residents, like the NCVS. Similarly, the President's 21st Century Policing Task Force also

highlighted the need for data on residents' perceptions of police. In their interim report, the Task Force recommended that "[l]aw enforcement agencies should track the level of trust in police by their communities just as they measure changes in crime" (President's Task Force on 21st Century Policing, 2015b: 16). In their fnal report, they suggested that these measures should be collected in a standardized way across jurisdictions, which would then allow for comparisons and for beginning to understand the factors that impact public trust and satisfaction with police (President's Task Force on 21st Century Policing, 2015a).

The purpose of the new questions is to respond to these data needs and recommendations. The challenge is to ask a manageable number and still be able to capture the underlying procedural justice concepts because in previous studies, the perceptions of police have been assessed through an extensive series of questions too extensive to be routinely asked of all respondents in the NCVS.

Once these design challenges are overcome, these measures of perceptions of police that are asked of both victims and nonvictims can then be used in conjunction with expanded measures of the police response to reported crime and victims' satisfaction with the response that are also being considered for the revised instrument. As victimization surveys are the only place to ask about victim reporting behaviors and perceptions of police when they respond to reported crime, another key focus of the redesign is on better capturing what the police did and how they behaved when they responded to a crime report. Although the police are often frst responders and may engage in a variety of activities at the scene of a crime, from mediation and tension diffusing, to crowd control and victim assistance, current core NCVS questions primarily are focused on police actions related to conducting a criminal investigation. In addition to capturing a more complete range of police activities at the scene, the revised questions will also be used to assess respondent satisfaction with the police response and perceptions of offcers' demeanor. Whereas the ask-all police items will be intended to capture respondents' general assessments of procedural justice, the questions about victim response in the core NCVS and resident interactions with police in the Police Public Contact Supplement will be meant to tie these same concepts to a particular interaction. In particular, given the longitudinal nature of the NCVS, these three sets of items will allow for an assessment of how well global versus specifc perceptions of police impact reporting behaviors and the extent to which victims' positive or negative experiences with police impact their overall perceptions of police legitimacy and effectiveness.

Use of Victim Services

Before the 1980s, little attention was paid in crime control policy to victims of crime. This changed dramatically in the 1980s with the creation of the Offce for Victims of Crime (OVC) and other criminal justice policy and practice efforts aimed at responding to victims' needs. In the 1990s, OVC was joined by the Offce on Violence Against Women (OVW) in supporting service provision as well as advocacy for victims of domestic violence, sexual assault, and stalking. For the past few decades, these programs have been intent on building

and maintaining the service infrastructure necessary to make victims of crime whole again. Their efforts eventually gained recognition from policy makers, and in 2015, Congress increased the annual Crime Victims Fund cap to \$2.361 billion, more than three times the amount of funding in 2014 (\$745 million).⁵ The balance of the fund is now more than \$10 billion, up from \$0.5 billion in 2000. These increased funds mean more victim service providers (VSPs) could potentially receive funding and that VSPs could be able to reach a greater number of victims, expanding the VSP feld. With the increased funding also comes expectations for increased information and transparency in how the funds are being used and more consideration about whether the funding is being used in a way that effectively meets the needs of crime victims.

As noted in OVC's Vision 21 report, "Serving crime victims requires a solid foundation of research about the causes and consequences of crime and its impact on victims. Unfortunately for too many years, victim service providers have lacked empirical data to guide their program development and implementation" (Offce for Victims of Crime, 2013: 1). In fact, although most of what we know about victims of crime and their help-seeking behaviors comes from the results of the NCVS, the survey currently includes just two questions about whether victims received assistance from victim service agencies. This is in part a result of the infancy of the victim service industry in the early 1980s when the NCVS was frst being redesigned. Therefore, a key area of focus for current NCVS instrument redesign efforts is on expanding the information collected regarding victim help-seeking from formal victim service agencies. Additional questions are being developed to capture information related to the types of services victims received and satisfaction with those services among victims who sought services, as well as the reasons for not seeking or receiving services among those who did get services.

The responses to these items will provide much-needed information about victim help-seeking and decisions related to help-seeking that is not currently available from any national data source. They can be used to assess gaps in the provision of services and factors preventing victims from getting the help they need. The fact that the NCVS is a rotating panel design in which households are visited several times during a 3-year period provides a particularly advantageous environment for assessing the effects of services on outcomes such as subsequent victimization. This allows for within-person or within-household designs that provide more rigorous analyses than cross-sectional designs (Biderman, Cantor, and Reiss, 1982; Dugan, 1999; Xie and Lynch, 2016).

Another key goal is to be able to use these items at the subnational level to examine state variation in the provision of victim services and to begin to assess the correlations in patterns of victim risk, reporting to police and receipt of services. Additionally, BJS has developed a new data collection program, the Victim Services Statistical Research Program

For more information on the Crime Victims Fund, go to ovc.gov/about/victimsfund.html and navaa.org/budget/index.html.

(VSSRP), composed of a national census of VSPs and a more detailed follow-up survey, both of which are focused on how VSPs are resourced and organized to provide services to victims.⁶ Eventually, the NCVS data will be used in conjunction with these collections to examine issues at the local level, such as the impact of a victim's proximity to services on likelihood of receiving services.

Sample Redesign—Subnational Estimation

The three major reviews of the NCVS program spanning four decades (Biderman et al., 1986; Groves and Cork, 2008; Penick and Owens, 1976) each emphasized the need for local-level empirical data on crime and criminal justice. Most recently, a 2008 assessment of the NCVS by the National Academies of Sciences noted that "the long-term viability of the NCVS will depend critically on its ability to provide sub-domain, subnational information" (Groves and Cork, 2008: 111). Although previous calls for subnational NCVS data were met with limited response, the most recent observation from the National Academies served as the impetus for developing the current NCVS subnational estimation program. It resulted in a full recognition that despite the utility of national estimates, criminal justice administrators and policy makers have a demand for data that can be used to examine subnational variation in crime rates and the correlates of crime. Local social and economic conditions may result in crime patterns that differ from the national picture, and policy makers at all levels have a vested interest in understanding the factors that lead to and mitigate criminal victimization and the impact of specifc policies or interventions on local changes in victimization rates over time.

Subnational victimization data also allow local stakeholders to develop a more complete picture of the crime problem and the response to the crime problem in their area. Although a large portion of crime goes unreported to police, most local areas rely on offcial police statistics to understand the crime in their community. Through this lens, they have a limited view of the crime problem. Victimization surveys, like the NCVS, on the other hand, are intended to provide at the local level many of the advantages that we mentioned earlier at the national level. Their design is aimed at offering a more inclusive measure of who is at risk for victimization, the types of crime that may not be coming to the attention of police, and the reasons they go unreported. Through the use of these surveys, we are provided with one of the only sources for information on residents' perspectives of the criminal justice system response to crime and victims, as well as with the level of their satisfaction with law enforcement and perceptions of the safety of the communities in which they live. NCVS data at the local level can be linked to other local-level sources of data on economic and social characteristics, law enforcement resources and policies, the availability and location of victim services, and offcial police records of crime, allowing for the development of a

For more information on VSSRP, go to bjs.gov/index.cfm?ty=tp&tid=98.

rich understanding of how the criminal justice system functions in the context of the local area, as well as of the gaps and shortcomings in the functioning of the system. As most responsibility for crime and justice is with state and local governments, these subnational survey data are more relevant to local decision makers.

Additionally, subnational estimates of crime and responses to crime have utility for resource allocation. At the local level, better information on the volume and nature of crime can assist in ensuring that adequate resources are allocated to address the problem. At the federal level, several grant programs rely on data from the UCR for initial allocations of funding going to each state, despite the limitations of these statistics. Because the NCVS is designed to capture the "dark fgure" of unreported crime, subnational NCVS estimates could be useful for more effcient and appropriate resource allocation.

Although the value of and need for subnational victimization data has long been recognized (Groves and Cork, 2008; Penick and Owens, 1976; Skogan, 1990), there are challenges to producing precise and reliable victimization survey estimates within reasonable budget constraints. These challenges play a large role in the development of the NCVS subnational estimation program. With a national sample design, like the NCVS, state and local areas may not have a sufficient sample—or may not have any sample at all—from which to generate precise and reliable estimates. In other instances, the size of the sample may be sufficient but the allocation of sample cases may not be representative of the population of that area. For example, a victimization estimate based primarily on data from Chicago is not likely to represent the crime problems experienced across the state of Illinois.

During the 43 years that the survey has been in existence, few concrete steps have been taken to explore different ways of addressing the challenges that prohibit producing useful subnational estimates with the survey (Biderman et al., 1986; Groves and Cork, 2008). This is especially true of approaches that require changes or additions to the ongoing NCVS. Nevertheless, as part of the second redesign, BJS developed a strategy for providing estimates at the state and local levels and tested the feasibility of that strategy (Cantor, Krentzke, Stukel, and Rizzo, 2010). This strategy was informed by a stakeholder needs assessment and through the consultation of other federal agency efforts in the area of subnational estimation. Specifcally, in the short term, BJS has taken a three-pronged approach to developing and testing a portfolio of both direct and indirect estimation procedures that includes (1) a boost and reallocation of the NCVS sample in the largest states; (2) the development of small-area, model-based estimates for the 50 states and select large counties; and (3) the grouping of generic areas based on specific social, economic, demographic, or geographic characteristics of interest and comparing across the "like" areas. These different approaches are based on certain assumptions about the variation in crimes across small areas, the comparability of survey methodologies, and the cost of these data collections. Pilot tests and assessments of these three strategies are used to provide valuable information about subnational differences in crime and to serve as the basis for deciding on the future of the subnational estimation program.

NCVS State Sample Boost

Direct estimates are counts and rates of crime generated directly from sample cases. Because the NCVS has historically been based on a nationally representative sample, to generate direct estimates from the NCVS in states and cities, the sample in these areas was reallocated and increased to allow for more precise estimates that are representative of the state's population, while maintaining the ability to produce national estimates. To test the feasibility of and resources required to generate direct subnational estimates, BJS and the Census Bureau conducted a pilot test sample boost from July 2013 through December 2015 in the 11 most populous states. These 11 states were chosen based on the level of the existing sample and the cost associated with adding the sample to reach desired levels of precision and representation. Based on anticipated response rates, design effects, and victimization rates, BJS's goal was to be able to generate state-level violent crime rates with relative standard errors of 10% for data aggregated over 3 years. Modeled after the American Community Survey (ACS),⁷ the pilot boost was designed to test this and other key sample design assumptions about response rates, household size, cost per case, the precision of estimates, and perhaps most importantly, state variability in the nature and level of crime.

The initial findings demonstrate considerable variation in violent crime rates at the state level, ranging from 11 victimizations per 1,000 persons 12 years of age or older up to 30 victimizations per 1,000. Likewise, property crime rates ranged from approximately 60 per 1,000 households up to 155 per 1,000 during the 30-month period. In addition to providing useful information about patterns and variations in the level and nature of victimization, the sample pilot boost in the 11 largest states yielded important information about anticipated response rates, household sizes, victimization rates, and other considerations impacting a state-representative sample design. It also demonstrated that state- and city-level direct estimates are possible to produce with reasonable precision and at a reasonable cost in larger areas.

Based on these fndings, BJS committed to a full-scale sample boost in the 22 largest states. After making critical changes to the sample design based on fndings from the pilot test, in January 2016, BJS increased and reallocated the sample in these 22 states to generate direct subnational estimates for these states and large cities and the metropolitan statistical areas (MSAs) within them. The 22 states account for an estimated 80% of the U.S. population and 80% of crime known to police.

For key estimates of violent crime, it was anticipated and confrmed by the pilot test that several years of data would be necessary to have a suffcient sample for state estimates or estimates for lower levels of geography. Yet, the findings from the pilot test also revealed that for some crime types, like property crimes, it may be possible to generate estimates from a

This approach to generating subnational estimates is also used in surveys such as the American Community Survey (for more on the design and methodology used, go to census.gov/programssurveys/acs/methodology/design-and-methodology.html).

single year of data. For other crime types, like rape and sexual assault, as well as for certain population subgroups, even 3 years of data may not be suffcient for BJS to produce offcial estimates that do not violate disclosure protections standards. Thus, it will be necessary for the NCVS to adopt an approach like that used by the ACS, in which different estimates are based on different rolling averages.

One major beneft to the direct estimation approach is that the full range of NCVS variables is available for each state and large cities and counties within the states. Along with the state victimization rates, the pilot boost fndings allow for assessment of variations in the severity of crime, the proportion of crime reported to police, and the characteristics of victims. Although the boost was designed to measure state-level victimization rates, it is also possible to generate these same types of estimates for large MSAs within the 11 largest states. This information on the hidden fgure of unreported crime and characteristics of victims and offenses cannot be obtained from the UCR, so these types of cross-area comparisons on issues like unreported crime were not previously possible.

Even though much valuable information can be learned from the sample pilot boost, the findings also revealed that boosting the sample is an expensive endeavor, even in the largest states with a considerable sample to begin with. Because of the cost, generating state estimates of victimization in states currently with few or no sample cases is not feasible from a resource perspective. Additionally, because crime is a rare event, even with a sample boost, it is often necessary to aggregate multiple years of data to have sufficient sample sizes for precise estimates. Therefore, 2 or 3 years of data collection must occur before the first estimates of violent victimization can be produced and retroactive estimation for earlier years is not possible. Thus, to account for these cost and time constraints, other approaches to generating subnational estimates, discussed as follows, are also being explored.

Most of these issues of sample size are relevant for researchers who want to make point estimates for these subnational areas. The sample sizes for states and large localities are typically suffcient to support multilevel analyses of victimization risk or outcomes, where the locality is used as a level of analysis. One could, for example, examine state-level effects on use of victim services while controlling for individual attributes and characteristics of the incident. This would allow for the use of estimates of predictors from the NCVS in that state as well as state-level predictors from other Census Bureau data on the state.

The NCVS micro-data with geographical identifiers are available in U.S. Census Bureau research data centers (RDCs) around the nation and with the permission of the Census Bureau can be used to construct these multilevel models (census.gov/ces/rdcresearch/).⁸

^{8.} The RDCs are operated by the Census Bureau's Center for Economic Studies, and there is a proposal process for accessing the NCVS restricted-use files that include geocoded information at the small-area level: census.gov/ces/rdcresearch/howtoapply.html. Researchers must recognize that the RDCs have a review committee that reviews all output for disclosure risk. Additionally, the proposal process has specific requirements related to purpose, scope, and deliverables.

Currently, the RDCs contain NCVS data fles for 2006–2014 with prior years and supplements forthcoming. These NCVS fles include geocode variables down to the Census Bureau tract level. In using these data, researchers must also understand that for select years, the sample was not designed or selected to be representative of these subnational areas (i.e., not stratifed by state or other lower level geographic unit beyond the four large regions). As a result, two possible issues occur: The sample in the state is not representative of that state or a tiny sample in a given state resulting in almost no precision or reliability. For example, the NCVS sample size is large in California, Texas, and New York because these are the largest states, but the sample may not be representative of the state's population. In other states, there are limited numbers of sample cases, if any. The discussion that follows about the subnational estimation and sampling plan is an attempt to rectify some of these issues in certain state and metropolitan areas.

Model-Based Subnational Estimates

Beyond the direct estimates, in December 2015, BJS published a report presenting model-based or small-area estimates (SAEs) of crime for all 50 states, as well as for select large core-based statistical areas (CBSAs; Fay and Diallo, 2015). The report includes a series of data tables with victimization rates from 1999 to 2013 for a range of property and violent crimes for each state and CBSA.

SAE techniques involve the use of statistical modeling to capture information from the existing sample and leverage auxiliary information related to the outcome of interest to produce subnational estimates. These techniques are used throughout the federal statistical community to generate estimates for areas or groups with little or no sample and limited reliability (Marton and Karberg, 2011: ch. 6). The NCVS SAE models comprise statistics from the FBI's UCR Summary System as auxiliary information (Fay and Diallo, 2015; Li, Diallo, and Fay, 2012), and are developed to estimate whether states will have high or low crime rates relative to one another based on patterns in the NCVS and UCR data. Nevertheless, because the NCVS sample data are given greater consideration in the model than the UCR data are, the NCVS state SAEs follow a similar trajectory to the national NCVS estimates over time, rather than the trajectory of the UCR national estimates.

The NCVS SAEs of violent crime revealed several apparent differences in geographic patterns from the UCR violent crime rates. For instance, based on NCVS SAE data from 2011 through 2013, Washington State and Oregon were above the national average for violent crime, whereas the UCR rates during the same period suggested they were below the national average. In contrast, Florida violent crime rates were below the average based on NCVS SAEs but above the average compared with the UCR. Although the 11-state pilot sample boosts covered different years compared with the NCVS SAEs, pilot sample boost data likewise showed Florida's violent crime rates to be below the national average.

Efforts to validate the model-based findings were conducted by comparing these estimates with aggregated NCVS data from prior years. For the largest 36 states, 15 years of

aggregated NCVS data were used to generate direct state-level estimates that could then be compared with state SAEs for the same period. As expected, the findings showed that in the largest states where there were bigger samples, the 15-year violent crime SAEs closely mirrored the corresponding direct estimates. In the smaller states, the SAE model tended to suppress some of the state variation and pulled the estimates of violent crime toward the mean. Nevertheless, in general, even in states where the state SAE was significantly different from the estimates generated directly from survey data, the differences were small at 1 standard error or less.

The use of SAE techniques for generating subnational estimates provides several benefts. Beyond the fact that the approach allows for the production of victimization rates for all 50 states, other benefts include the ability to go back in time to assess trends in victimization by state and the limited costs associated with these estimates. SAEs reveal different trends in victimization rates across states and counties. Even though many states have declines similar to the national trends, others are fat or have upticks in certain types of crime.

BJS continues to explore the longer term uses of and improvements to SAE techniques for generating valuable victimization estimates in states, cities, and counties where direct estimation is not possible. The increased NCVS sample size and ability to generate direct NCVS estimates of victimization in 22 states and some localities should allow for further refinement and expansion of the models to provide additional estimates of victim and incident characteristics. At the same time, the BJS and FBI efforts to move national law enforcement statistics from the UCR summary reporting system to the full implementation of the National Incident-Based Reporting System (NIBRS) will also contribute to efforts to build on the NCVS SAE program. Part of the challenge of using the summary UCR data is that we cannot obtain information on the nature of crimes, victims, or offenders known to police from the summary statistics. When NIBRS efforts are fully realized or we receive a nationally representative sample of agencies reporting incident-based data to the FBI from the NCS-X, this richer, local-level data on the characteristics of victims and incidents could also be incorporated into the models to refne the state-to-state comparisons that are critical for estimation.

The availability of incident-level police data through NCS-X and NIBRS (Strom and Smith, 2017, this issue) means we will have an alternative to modeling that should provide better data on crime in some subnational areas. Use of incident-level data on offenses reported to the police allows these data to be blended with incident-level victimization survey data that can then be used to produce not only jurisdiction-level estimates but also jurisdiction-specifc estimates for subgroups or subclasses of events in the jurisdiction (Lohr and Brick, 2012). Different weights are given to the police and survey data when they are blended, and adjustments are made for bias in the data sets. BJS tested this methodology with low-cost companion surveys, and use of incident-level police data provides another opportunity. Although incident-level data are not available nationally, several states and

large localities have a suffcient NCVS sample (thanks to the sample redesign) and report incident-level police data and thereby permit the use of this methodology.

In the short term, while SAE research and development efforts continue, researchers can examine trend and level differences between states and large counties for a variety of crime types by using the developmental estimates published with the report (Fay and Diallo, 2015).

Generic Area Estimation

A generic area typology is created using available geographic, demographic, social, or economic indicators to create "like place." As the term suggests, these areas are not specific to a single state or city, but they represent places that are similar on the characteristic of interest. For instance, if grouping places according to geographic variables available on the public-use fles, a "city with a population of 250,000 to 500,000 in the Northeast" represents places like Buffalo, NY, and Pittsburgh, PA (Planty, 2012; RTI International, 1984). This approach has been used with success by major corporations, like CACI (London, U.K.) that developed the Acorn system to classify and understand different types of consumers.⁹

By using public-use fles, generic areas can be created based on combinations of geographic identifers—region, urbanicity, and population (Shook-Sa, Lee, and Berzofsky, 2015). This approach has value for understanding issues like whether and how crime problems vary in midsized cities across the country or how urban and rural crime problems vary within a particular region.

Use of geographically identifed, restricted-use NCVS data¹⁰ and alignment with external sources of demographic, social, economic, or other data creates nearly limitless possibilities for the generic area approach. For example, in 2014, BJS published a report titled, *Violent Victimization in New and Established Hispanic Areas*, in which four types of Hispanic areas across the United States are identifed—established slow growth, established fast growth, new emerging areas, and small Hispanic areas (Xie and Planty, 2014). The authors of the report, Xie and Planty, examined differences in victimization rates for Hispanics and persons of other racial groups across each of these four areas.

Beyond the range and variety of research questions that could be addressed using the generic area approach, another beneft to this type of subnational estimation is that researchers can make use of any and all data fles that are available, both historic and current. There are no additional costs, and this type of analysis can be conducted at any time. As noted, the NCVS has restricted-use data fles for 2006–2014 posted at the RDCs, with additional years forthcoming. Although the NCVS sample was not designed or selected to be representative at the state or local level, following this generic area approach alleviates

^{9.} For more information on Acorn, go to acorn.caci.co.uk/what-is-acorn.

^{10.} The NCVS restricted-use files available through the U.S. Census RDCs have geocode variables down to the U.S. Census tractlevel.

these problems as well as other methodological concerns about suffcient sample sizes and reliable estimates.

BJS continues to assess options for the dissemination of subnational estimates that will maximize the utility of these data. This assessment involves examining ways to validate and improve the estimates generated through small-area estimation techniques and assessing the utility of these model-based estimates for researchers and policy makers. BJS also continues to explore ways in which SAEs could be integrated into a longer term subnational dissemination plan that relies on a combination of direct and model-based estimates to provide more complete coverage of the states and counties in the United States than could be feasibly provided through direct estimates alone. Use of the increased sample also opens up opportunities at the national level to examine policy-relevant issues, such as gun violence, or to assess certain subgroup differences to a greater degree than was previously possible with a smaller overall sample.

Summary and Promises for the Future

Self-report surveys of criminal victimization will always be an important part of our crime statistics system. Use of these surveys provides one of the few opportunities for citizens to offer direct input into the definition of the crime problem unfltered by the policies and effectiveness of criminal justice agencies. They are the only reliable source of data on many crimes not routinely reported to the police. Victimization surveys are used to support the analysis of victimization risk by providing comparable data on victims and nonvictims at the person and incident levels. By conducting these surveys, researchers and law enforcement agencies alike gain access to extensive information on the consequences of victimization known only to victims and can assess the nature and effectiveness of responses to crime from the police and from victim service agencies. Surveys are more fexible and adaptable than our existing system of statistics based on police administrative records because the survey is centrally administered and the police statistics are aggregations of more than 18,000 states and localities.

Because these surveys are so central to the description and understanding of crime and its consequences, it is important that they are updated to keep pace with changes in funding, crime, and technology to maintain both their accuracy and relevance. To do this, punctuated "redesigns" of these surveys must occur where changes in the function of the survey in our system of crime statistics, the scope of crimes considered in the survey, its methodology, and the information content of the interview are considered and adjusted if necessary. The ongoing recognized stasis of the survey design is significantly interrupted by larger rate-affecting modifications. The survey research industry has changed radically in the last two decades, and it is becoming more diffcult to use traditional methods for eliciting information from respondents. This punctuated change is in response to the collective gradual change in the industry, technology, and society writ large. Response rates are declining, and costs are increasing. In this environment, new technologies must be

used to facilitate response and reduce costs. New crimes must be identified and questions developed to include them in the survey. Questions need to be fashioned to tap additional information on police response and victim services. The foregoing described efforts to these ends in the second redesign of the NCVS.

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