2024

Past and Present of the CVS: Empirical Research and Evidence-Based Policy

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Keynote Address

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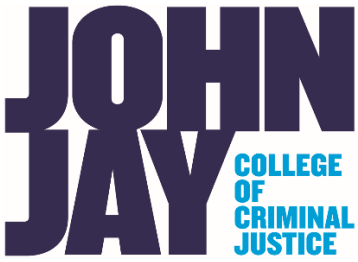
On the Occasion of the
The 3rd Asia Pacific Expert Conference for Criminal Justice (APECCJ)

Main Theme:
Evidence-Based Policy & Digital Technologies: The Future of the Asia-Pacific Region's Crime Victimization Survey (CVS) and Crime and Criminal Justice Statistics (CCJS)

August 13, 2024
Seoul, South Korea



Introduction:

I would like to thank the Korean Institute of Criminology and Justice for the invitation to participate in the **3rd Asia Pacific Expert Conference for Criminal Justice.** I am an Associate Professor in the Department of Criminal Justice at John Jay College in New York City and for more than 10 years I have conducted empirical research with the goal of improving the justice system for both those who are involved in it as well as society more generally.

The theme for this conference is **Evidence-Based Policy & Digital Technologies: The Future of the Asia-Pacific Region's Crime Victimization Survey (CVS) and Crime and Criminal Justice Statistics (CCJS)**.

It is a great honor to address you today on the vital topic of crime victimization surveys and the transformative role of artificial intelligence in shaping evidence-based criminal justice policy. In an era where data-driven insights are increasingly pivotal, our understanding of crime patterns and victimization has never been more critical. Today we will hear from a number of experts who are on the cutting edge of research in this area.

The Importance of Accurate Crime Estimates

I want to start by highlighting that accurate crime measurement is fundamental for the development of evidence-based policy, as it provides a clear understanding of crime patterns, victimization rates, and the efficacy of community-based and law enforcement responses. Reliable data enables policymakers to identify trends, allocate resources effectively, and tailor interventions to address the most pressing issues. For instance, accurate crime statistics reveal the true extent and impact of various crimes, informing strategies to enhance public safety and support victims. Furthermore, accurate information on the incidents of crime can be used to assesses the performance of criminal justice agencies, highlighting areas that require improvement. Ultimately, precise crime measurement fosters transparency, accountability, and informed decision-making, which are

essential for creating effective and just policies that can reduce crime and its consequences for society.

The Dark Figure of Crime

As I am sure everyone in this room is aware, the "dark figure of crime" refers to the substantial amount of unreported and undiscovered crime that eludes official crime statistics. This phenomenon presents a significant challenge to the accurate measurement and understanding of crime. Many crimes go unreported due to various reasons, including victims' fear of retaliation, distrust in law enforcement, perception of the crime as too trivial, or lack of awareness about how to report the crime.[i] As a result, official crime data often represent only a fraction of the actual crime rate, leading to an underestimation of the true scope and nature of criminal activity. This gap, between reported and actual crime, undermines the reliability of crime statistics and hampers efforts to develop effective crime prevention and intervention strategies.

Addressing the dark figure of crime is crucial for enhancing the accuracy of crime measurement and improving public policy. Victimization surveys, such as the Crime Victimization Survey (CVS), play a vital role in uncovering hidden crimes by directly asking individuals about their experiences with crime, regardless of whether they reported these incidents to the police. By providing a more complete picture of crime, these surveys help bridge the gap left by official statistics, offering valuable insights into the prevalence, characteristics, and impacts of unreported crime. This, in turn, informs evidence-based policy making, enabling authorities to allocate resources more effectively, design targeted interventions, and implement victim support programs that address the real needs of the community. Ultimately, reducing the dark figure of crime is essential for creating a safer, more informed, and responsive society.

Advantages of Comprehensive Survey Methods

Victimization surveys offer several significant advantages, making them a crucial tool in understanding and addressing crime effectively. In addition to shining light on the dark figure of crime, victimization surveys help us to understand the personal and social costs of crime, which are often overlooked in official statistics. They also highlight the experiences of high-risk and vulnerable groups, such as women, the elderly, and those living in marginalized communities, who may not be adequately or accurately represented in official crime data.

Unlike official statistics, victimization surveys do not rely on the legal definitions used by police and judicial systems, allowing for a more consistent and comparable measure of crime across different regions and countries.[ii]

Furthermore, victimization surveys shed light on why victims do not report crimes, revealing barriers such as fear of retaliation, lack of trust in the police, or belief that the crime is too trivial. This information can help improve reporting rates and enhance police-community relations.[iii]

These surveys often include questions about individuals' fear of crime and their perceptions of safety, providing insights into the psychological and social impacts of crime.

When conducted using standardized methodologies, victimization surveys allow for international comparisons of crime rates and trends, fostering cross-national learning and the sharing of best practices in crime prevention and criminal justice. Lastly, they collect detailed information about the nature and circumstances of crimes, such as location, time, and the relationship between victim and offender, which helps in understanding crime dynamics and developing targeted prevention strategies.[iv]

In summary, victimization surveys are a powerful tool for obtaining a comprehensive, victim-centered understanding of crime, essential for effective crime prevention, policy development, and the promotion of

public safety. As we look ahead, I see numerous opportunities to enhance the efficacy and impact of both the CVS and more traditional crime statistics.

Opportunities

Technological advancements have revolutionized survey data collection by enhancing efficiency and broadening reach. Online platforms and mobile apps enable researchers to distribute surveys globally at a low cost, reaching a diverse audience. Automation reduces manual errors and streamlines data processing, allowing for real-time data collection and immediate feedback. This responsiveness ensures surveys are relevant and data quality is maintained. Additionally, enhanced security protocols protect respondent data, upholding ethical research standards.

Advancements in technology also improve the design and engagement of surveys. Interactive elements, multimedia content, and gamification can make surveys more engaging, leading to higher response rates.[v] Furthermore, technology enhances accessibility, making surveys more inclusive for people with disabilities through tools like voice recognition and screen readers. Overall, these advancements have significantly improved the effectiveness and inclusivity of survey data collection.

The increased availability of big data can also significantly enhance our understanding of crime by offering a detailed and comprehensive view of criminal behavior and trends. By aggregating and analyzing vast amounts of information from diverse sources—such as crime reports, social media activity, economic data, and environmental factors—researchers can uncover patterns and correlations that might not be evident from traditional data analysis.

As an example, I would like to discuss some of the work one of my doctoral students has been working on for his dissertation in which he uses Google Trends to estimate the prevalence of crime/criminal victimization across regions in the United States.

Google Trends is a valuable tool for estimating the prevalence of various topics by analyzing search query data from Google Search. Using big data as its foundation, this tool collects anonymized, aggregated data from users and normalizes it to reflect search interest relative to the highest point for a selected time and location. Researchers can utilize Google Trends to track emerging trends, conduct comparative analyses, identify geographic patterns, and observe seasonal variations.[vi]

For instance, by selecting relevant keywords related to vehicle theft, my doctoral student has been able to identify periods and regions with increased search interest, providing insights into the prevalence and potential correlates of car theft across regions in the U.S. Using traditional crime statistics (drawn from the FBI's Uniform Crime Reports) as a baseline, he has shown that Google Trends provides a valid and reliable estimate criminal activity, especially when it comes to motor vehicle theft.[vii] He has also used it to explore the association between car prices and auto theft across metro areas in the U.S. over the last 10 years.

However, it's important to note the limitations of Google Trends. The tool provides relative, not absolute, data, and search behavior might not always reflect actual prevalence but rather increased curiosity or concern. While Google Trends is available within many countries across the globe, its accuracy depends, of course on internet available and saturation as well as the popularity of Google Search itself. Despite these limitations, under certain circumstances Google Trends can significantly complement traditional data collection methods, offering a real-time, accessible way to monitor trends and behaviors.

Regional collaboration and standardization are also crucial for the future of the CVS and crime and criminal justice statistics. The International Classification of Crime for Statistical Purposes (ICCS) is a standardized framework developed by the United Nations Office on Drugs and Crime (UNODC) to ensure uniformity in the collection, reporting, and analysis of crime data across countries.[viii] This classification system aims to enhance

the comparability of crime statistics at the international level, enabling better analysis and understanding of global crime patterns and trends.

ICCS categorizes crimes into a comprehensive and mutually exclusive set of categories, allowing for consistent statistical analysis and leading to improvements in comparative criminological research.[ix] The classification covers a wide range of criminal offenses, from violent crimes and property crimes to drug-related offenses and cybercrime. By providing clear definitions and classification criteria, the ICCS helps countries align their national crime data with international standards, facilitating more accurate and reliable comparisons. This standardized approach is crucial for informing policy decisions, developing effective crime prevention strategies, and fostering international cooperation in combating crime. I look forward to hearing from the speakers today joining us from KOSTAT regarding the work on the ICCCS in South Korea and the Pacific.

As we move forward, it is essential to focus on emerging crime trends. Cybercrime, for instance, is becoming increasingly prevalent in our digital age, necessitating greater attention within crime victimization surveys although there is evidence that cybercrimes are often more likely to go unreported.[x] Similarly, environmental crime, related to degradation and resource exploitation, is another area that desperately requires our attention.[xi] By integrating these emerging trends into both CVS and CCJS, we can ensure that our data reflects the current and evolving landscape of criminal activity.

Inclusivity and representation are key components of any effective survey. We must ensure that our surveys include diverse populations, especially marginalized and vulnerable groups.[xii] Collecting gender-specific data is also critical to understanding the differential impact of crime on men, women, and underrepresented individuals, allowing us to tailor our interventions more effectively.[xiii] By complementing CVS data with detailed incident-level information CCJS, we can provide a richer and more nuanced understanding of how different populations experience and respond to crime.

The results of the CVS are not just data points; they are the foundation for evidence-based policymaking. By utilizing these results, we can inform and shape effective crime prevention and intervention policies. Accurate crime estimates are crucial for identifying trends, understanding the prevalence and scope of various crimes, and recognizing the populations most affected. This data-driven approach ensures that resources are allocated efficiently and that interventions are tailored to address the most pressing issues. Integrating CVS findings with CCJS data will allow policymakers to see the broader context, helping to craft more holistic and effective policies. When policymakers have access to accurate and comprehensive crime data, they can develop strategies that not only address current crime rates but also anticipate future challenges, leading to more sustainable and long-term solutions.

AI has entered the game

Shifting gears now… Artificial Intelligence (AI) presents numerous opportunities to enhance and transform criminal justice systems across the globe. By leveraging AI's capabilities in data analysis, pattern recognition, and predictive modeling, researchers as well as law enforcement agencies can improve the accuracy and efficiency of crime detection and prevention. Predictive policing allows for the identification of crime hotspots and better allocation of resources, enabling law enforcement to deploy officers more effectively and reduce response times.[xiv] AI-driven forensic tools can analyze vast amounts of digital evidence quickly and accurately, identifying patterns and connections that might be missed by human investigators. If done correctly, this has the potential to expedite the resolution of cases and improve the overall efficacy of criminal investigations.[xv]

Additionally, AI can assist in identifying and mitigating biases within the criminal justice system, promoting fairer decision-making processes. Machine learning algorithms can analyze historical data to uncover implicit biases in sentencing, parole decisions, and other judicial processes, providing insights that can inform policy reforms and training programs. Natural Language Processing (NLP) can analyze police reports and social

media for emerging threats and public sentiment, aiding in quicker response times and more informed policy decisions. By monitoring and analyzing online communication, AI can help identify potential criminal activities and threats before they escalate, enhancing public safety and community trust.

Furthermore, AI-powered dashboards and visualization tools provide real-time insights into crime trends, enabling proactive measures and improved community safety. These tools can integrate data from various sources, such as crime reports, social media, and public records, offering a comprehensive view of criminal activity. This holistic approach allows law enforcement agencies to identify and address underlying issues contributing to crime. Moreover, AI can support resource allocation by predicting future crime patterns and optimizing the distribution of personnel and equipment. These advancements not only enhance operational efficiency but also foster greater transparency and trust between the public and law enforcement agencies, ultimately leading to a more effective and equitable criminal justice system.

As an example, I would like to highlight Chicago's Strategic Decision Support Centers (SDSCs). The AI-driven support centers represent a pioneering approach to leveraging predictive analytics for crime prevention and resource optimization. Launched as part of the Chicago Police Department's (CPD) larger initiative to reduce crime and improve public safety, SDSCs utilize a combination of data-driven strategies, advanced analytics, and real-time information to support tactical decision-making.[xvi] These centers are strategically located within police districts and are equipped with cutting-edge technology, including predictive analytics software, surveillance systems, and data visualization tools.

The primary function of SDSCs is to analyze historical crime data and identify patterns and trends that can forecast future criminal activity. By employing sophisticated algorithms, the centers can predict potential crime hotspots with high accuracy, enabling the CPD to allocate resources more effectively. This predictive capability allows for the deployment of police

officers to areas where crime is most likely to occur, thereby preventing incidents before they happen. Additionally, the real-time data analysis performed at SDSCs facilitates rapid response to emerging threats, improving overall operational efficiency and increased crime clearance rates.[xvii]

SDSCs also integrate data from various sources, including 911 calls, incident reports, and even social media, to provide a comprehensive view of the crime landscape. This holistic approach not only aids in hotspot identification but also helps in understanding the underlying causes of crime, such as active gang or drug market activity. The insights gained from SDSCs are used to inform strategic planning, community policing efforts, and policy development, ultimately contributing to a significant reduction in crime rates and enhanced public safety.

Challenges

While many exciting opportunities exist, it is important to acknowledge that in order to achieve these goals, we must address sustainability and funding. Securing long-term funding sources is essential to ensure the continuity and continuance of the CVS as well as the incorporation of leading AI tools into the collection and analysis of criminal justice data. Investing in training and capacity building for researchers and institutions involved is equally important to maintain high standards of data collection and analysis. A coordinated approach can attract broader support and resources, reinforcing the sustainability of our efforts.

As we navigate the complexities of modern society, the integration of artificial intelligence into this process marks a significant advancement. AI can provide powerful tools for data analysis, predictive policing, and crime prevention, but it also raises concerns about privacy, bias, and accountability.

The potential for AI to contribute to bias in the criminal justice system stems from several sources and manifests in various ways, necessitating comprehensive strategies for mitigation.[xviii] One primary source of bias is

historical data, which often reflects societal prejudices. If AI systems are trained on this biased data, they can perpetuate existing inequities. Additionally, selection bias arises when the training data does not adequately represent the entire population, leading to models that perform poorly for underrepresented groups. Similarly, measurement bias happens when the variables used in AI models do not accurately capture the underlying concepts they aim to represent, potential skewing results away from the intended targets. Algorithmic bias can also occur due to the design and optimization choices made during model development.

These biases manifest in multiple areas within the criminal justice system. For instance, predictive policing tools might disproportionately target minority communities if they rely on biased historical crime data. Risk assessment algorithms, used to evaluate the likelihood of reoffending, can unfairly classify individuals from certain demographic groups as high-risk based on biased inputs. Similarly, AI recommendations in sentencing and parole decisions might favor certain groups over others, potentially perpetuating unequal treatment.

Several case studies highlight the impact of AI bias. The COMPAS algorithm in the US, used for assessing recidivism risk, has shown significant racial biases, often predicting higher reoffending rates for Black defendants compared to white defendants. Facial recognition systems have demonstrated higher error rates for people of color, leading to wrongful identifications and arrests.[xix] The PredPol algorithm for predictive policing has faced criticism for reinforcing biases by targeting minority neighborhoods disproportionately. However, recent research has shown that when used effectively AI can lead to more targeted responses, resulting in impactful enforcement without resulting in biased arrests.[xx]

Addressing AI bias in the criminal justice system requires a multifaceted approach that combines technical solutions with ethical considerations and robust regulations to leverage AI's benefits while promoting fairness and justice. Data auditing and cleaning are essential to identify and correct biases within datasets, ensuring diverse and representative training data.

Increasing algorithmic transparency helps stakeholders understand how AI decisions are made. Techniques for detecting and correcting bias, such as using fairness metrics, are crucial to assure equitable outcomes. Continuous monitoring and evaluation of AI systems are necessary to detect and address biases as they arise, and policy and regulatory frameworks must promote fairness and accountability in AI usage.

Concluding Remarks

The continued development of CVS and CCJS data will provide a more complete view of crime, revealing patterns and trends that might be missed when these data sources are considered in isolation. By addressing these challenges and leveraging our strengths, we can provide a clearer picture of crime in the Asia-Pacific region, enabling more effective responses and preventive measures. The integration of CVS and CCJS data, augmented by AI technologies, will amplify our understanding and enable more robust solutions.

Furthermore, advancements in technology present both challenges and opportunities. On one hand, technology can bolster our data collection and analysis capabilities, making it easier to gather and interpret large volumes of data. On the other hand, it also poses risks to privacy, data security and the systematic perpetuation of societal injustices. We must be vigilant in protecting the sensitive information we collect, ensuring that our use of technology complies with the highest ethical standards and leads to unbiased outcomes.

Regional collaboration is another key factor in our success. By working together, sharing best practices, and supporting each other in our efforts, we can overcome common challenges and amplify our impact. Collaborative initiatives can lead to more consistent data collection methods, improved data quality, and a stronger collective response.

In conclusion, the future of the Asia-Pacific Region's Crime Victimization Survey and the CCJS is bright. With advancements in technology, increased regional collaboration, and a focus on emerging crime trends, both the CVS and the CCJS can significantly contribute to crime prevention and policy-making in the Pacific region. By responsibly incorporating emerging AI technologies, we can achieve a more comprehensive and effective approach to understanding and combating crime.

Together, we stand at the threshold of a new era, where technology and data-driven insights can help us build a safer and more just society for all. I look forward to engaging with you on this crucial subject and exploring how we can harness these tools to make informed, evidence-based decisions that truly serve our communities.

Thank you.

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