



ICPSR 29203

# Impact of Forensic Evidence on the Criminal Justice Process in Five Sites in the United States, 2003-2006

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User Guide



National Institute of Justice  
Data Resources Program

# ICPSR

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## **Bibliographic Description**

ICPSR Study No.: 29203

Title: Impact of Forensic Evidence on the Criminal Justice Process in Five Sites in the United States, 2003-2006

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## **Scope of Study**

Summary: The purpose of the study was to investigate the role and impact of forensic science evidence on the criminal justice process. The study utilized a prospective analysis of official record data that followed criminal cases in five jurisdictions (Los Angeles County, California; Indianapolis, Indiana; Evansville, Indiana; Fort Wayne, Indiana; and South Bend, Indiana) from the time of police incident report to final criminal disposition. The data were based on a random sample of the population of reported crime incidents between 2003 and 2006, stratified by crime type and jurisdiction. A total of 4,205 cases were sampled including 859 aggravated assaults, 1,263 burglaries, 400 homicides, 602 rapes, and 1,081 robberies. Descriptive and impact data were collected from three sources: police incident and investigation reports, crime lab reports, and prosecutor case files. The data contain a total of 175 variables including site, crime type, forensic variables, criminal offense variables, and crime dispositions variables.

Subject Term(s): aggravated assault, arrests, burglary, convictions (law), crime, crime laboratories, criminal investigations, evidence, forensic sciences, homicide, offenses, prosecution, rape, robbery, sentencing

Smallest Geographic Unit: city

Geographic Coverage: California, Evansville, Fort Wayne, Indiana, Indianapolis, Los Angeles, South Bend, United States

Time Period: 2003 - 2006

Date(s) of Collection: September 2006 - June 2009

Unit of Observation: crime incident

Universe: All reported incidents of aggravated assault, burglary, homicide, rape, and robbery that occurred in Los Angeles County, California; Indianapolis, Indiana; Evansville, Indiana; Fort Wayne, Indiana; and South Bend, Indiana; between 2003 and 2006.

Data Type: administrative records data

## Methodology

Purpose of the Study: The purpose of the study was to investigate the role and impact of forensic science evidence on the criminal justice process. Specifically, for this project, the National Institute of Justice established four goals and objectives:

1. Estimate the percentage of crime scenes from which one or more types of forensic evidence is collected;
2. Describe and catalog the kinds of forensic evidence collected at crime scenes;
3. Track the use and attrition of forensic evidence in the criminal justice system from crime scenes through laboratory analysis, and then through subsequent criminal justice processes; and
4. Identify which forms of forensic evidence contribute most frequently (relative to their availability at a crime scene) to successful case outcomes.

Study Design: The study utilized a prospective analysis of official record data that followed criminal cases in five jurisdictions (Los Angeles County, California; Indianapolis, Indiana; Evansville, Indiana; Fort Wayne, Indiana; and South Bend, Indiana) from the time of police incident report to final criminal disposition. Sites were selected to represent city, county and state crime laboratory services. The data were based on a random sample of the population of reported crime incidents between 2003 and 2006, stratified by crime type (aggravated assault, burglary, homicide, rape, and robbery) and jurisdiction. A total of 4,205 cases were sampled including 859 aggravated assaults, 1,263 burglaries, 400 homicides, 602 rapes and 1,081 robberies. Descriptive and impact data were

collected from three sources: police incident and investigation reports, crime lab reports, and prosecutor case files. A unique case identifier linked police incident and crime lab reports and, for most crime incidents, connected the case with the prosecutors' database. For cases that could not be linked through the unique identifier number, suspects name, race/ethnicity, and birth date were used to connect the case with prosecutor data.

Various forensic variables were used for both descriptive and outcome analyses. Data were collected on various crime scene evidence types (biological, latent prints, pattern evidence, firearms/weapons, natural synthetic materials, generic objects, electronic/printed data, trace, drugs, and other) and substrates. Furthermore, the study explored the effect of forensic evidence on five different case outcomes, including:

1. whether a reported crime incident resulted in an arrest,
2. whether a case arrest was referred to the district attorney,
3. whether an arrested suspect(s) was formally charged,
4. whether a prosecuted defendant was convicted, and
5. sentence length for incarcerated offenders.

Sample: A total of 4,205 cases from five jurisdictions (Los Angeles County, California; Indianapolis, Indiana; Evansville, Indiana; Fort Wayne, Indiana; and South Bend, Indiana) were sampled including 859 aggravated assaults, 1,263 burglaries, 400 homicides, 602 rapes, and 1,081 robberies. The data were based on a random sample of the population of reported crime incidents for the year 2003, stratified by crime type and jurisdiction. Crime incidents for the year 2003 were used so that cases would have complete data, including final dispositions. Due to the relatively low numbers of homicides and rapes committed annually, as well as the greater likelihood of forensic evidence for these two crimes, reported incidents for homicide and rape were over-sampled for Los Angeles and Indianapolis.

Similarly, due to the lower number of crime incidents in the three smaller Indiana sites (Evansville, Fort Wayne; and South Bend) as well as changes in data management systems in Evansville, additional years were included in the sample selection process for these sites. Specifically, in Evansville, because of a change in data management systems, effective mid-September 2003, and due to the relatively low numbers of homicides and rapes committed annually, all homicides occurring from mid-September 2003 through December 2006 and all rapes occurring from mid-September 2003 through December 2005 were reviewed to achieve the desired sample size. Likewise, due to the change in data management systems, aggravated assault, burglary and robbery cases in Evansville were sampled from incidents occurring after September 2003 and during all of 2004. In Fort Wayne and South Bend, due to the relatively low numbers of homicides committed annually, all homicides

occurring during 2003 and 2004 were reviewed to achieve the desired sample size.

Weight: none

Sources of Information: police incident and investigator reports

crime lab reports

prosecutor case files

Mode of Data Collection: record abstracts

Description of Variables: The data contain a total of 175 variables including site, crime type, forensic variables, criminal offense variables, and crime dispositions variables. Specifically, forensic variables include whether evidence was collected at crime scene, types of evidence and substrates collected at crime scene, whether evidence was submitted to crime lab, types of evidence and substrates submitted to lab, and whether evidence was examined in lab. Other forensic variables include whether evidence links suspect to victim and/or crime scene and whether tangible evidence was collected at crime scene. Criminal offense variables include time from incident to report, time from incident to arrest, victim characteristics, suspect characteristics, number of eyewitnesses, number of victims, victim report to police, witness report to police, victim/suspect relationship, and victim receipt of medical treatment. Crime dispositions variables include suspect arrest, district attorney referral, case charged, case conviction, sentence type, sentence length, attorney type, plea, suspect apprehended within ten minutes of the crime, type of arrest technique, number of prior arrests, and number of prior convictions.

Response Rates: not applicable

Presence of Common Scales: none

Extent of Processing: Standardized missing values.

Checked for undocumented or out-of-range codes.

## **Access and Availability**

Note: A list of the data formats available for this study can be found in the [summary of holdings](#). Detailed file-level information (such as record length, case count, and variable count) is listed in the [file manifest](#).

Original ICPSR Release: 2010 ~~XXXXXX~~

Dataset(s):

- DS1: Impact of Forensic Evidence on the Criminal Justice Process in Five Sites in the United States, 2003-2006

## Publications

Final Reports and Other Publication Resources: A list of publications related to, or based on, this data collection can be accessed from the study's download page on the NACJD Web site or through the ICPSR Bibliography of Data-Related Literature at <http://www.icpsr.umich.edu/ICPSR/citations/index.html>. The list of citations includes links to abstracts and publications in Portable Document Format (PDF) files or text files when available.

Final reports and other publications describing research conducted on a variety of criminal justice topics are available from the National Criminal Justice Reference Service (NCJRS). NCJRS was established in 1972 by the National Institute of Justice (NIJ), an agency of the U.S. Department of Justice, to provide research findings to criminal justice professionals and researchers. NCJRS operates specialized clearinghouses that are staffed by information specialists who supply a range of reference, referral, and distribution services. Publications can be obtained from NCJRS at NIJ/NCJRS, Box 6000, Rockville, MD, 20849-6000, 800-851-3420 or 301-519-5500. TTY Service for the Hearing Impaired is 877-712-9279 (toll-free) or 301-947-8374 (local). The URL for the NCJRS Web site is:

<http://www.ncjrs.org/>

## NIJ Data Resources Program

About the DRP: The National Institute of Justice Data Resources Program (DRP) makes datasets from NIJ-funded research and evaluation projects available to the research community and sponsors research and training activities devoted to secondary data analysis. Datasets are archived by the National Archive of Criminal Justice Data (NACJD) at the Inter-university Consortium for Political and Social Research (ICPSR) at the University of Michigan.

The NACJD maintains a World Wide Web site with instructions for transferring files and sending messages. Criminal justice data funded by the Department of Justice are available via the Internet at this site at no charge to the user. NACJD may be contacted at NACJD/ICPSR, P.O. Box 1248, Ann Arbor, MI, 48106-1248, 800-999-0960. The URL for the NACJD Web site is:

<http://www.icpsr.umich.edu/NACJD/>



## Data Completeness Report

Notes: (1) Variables are individually listed only if they have greater than 5% missing data. These variables are listed under the appropriate percentage category in the order in which they appear in the data file. (2) The Data Completeness Report only captures information about system missing or other values that are declared missing. Codes that have a label implying that they are missing but that are not declared missing values are not reflected in this report. Data users should consult the codebook for more specific information about missing values. (3) Some variables that have 100% missing data may have been blanked by ICPSR to protect respondent confidentiality. Data users should consult the codebook for more specific information about blanked variables. (4) Data do not contain skip patterns or skip patterns are not reflected in the data as coded.

**Table 1: Distribution of Variables by Percentage of Missing Values**

<b>Variable Name and Label (Total Cases = 4205 )</b>	<b>Percent of Cases with Missing Values</b>
94.9% ( 166 of 175 variables)	have 0% Missing Values
0.0% ( 0 of 175 variables)	have 0% - 1% Missing Values
0.0% ( 0 of 175 variables)	have 1% - 3% Missing Values
0.0% ( 0 of 175 variables)	have 3% - 5% Missing Values
0.0% ( 0 of 175 variables)	have 5% - 10% Missing Values
0.0% ( 0 of 175 variables)	have 10% - 20% Missing Values
1.1% ( 2 of 175 variables)	have 20% - 40% Missing Values
VICTIMS	NUMBER OF VICTIMS 30.8%
TIMEREPORT	# OF DAYS TO REPORT INCIDENT TO POLICE 28.4%
4.0% ( 7 of 175 variables)	have 40% - 99% Missing Values
SUSPECTAGE	SUSPECT AGE 49.0%
SENTENCE	SENTENCE LENGTH 84.1%
TIMEARREST	# DAYS FROM INCIDENT TO ARREST 67.4%
DIRECTARREST	ARREST TECHNIQUE 60.9%
ARRESTS	# OF PRIOR ARRESTS BY OFFENDER 71.7%
CONVICTS	# OF PRIOR CONVICTIONS BY OFFENDER 73.1%
ATTORNEY	ATTORNEY TYPE DEFENDING OFFENDER 81.8%
0.0% ( 0 of 175 variables)	have 100% missing values