



Bureau of Justice Statistics

Using Technology to Modernize Data Presentations in the National Crime Victimization Survey

Erika Harrell, Grace Kena, Alexandra (Lexy) Thompson

Victimization Statistics Unit

April 5-6, 2022 | FedCASIC Workshops



Background



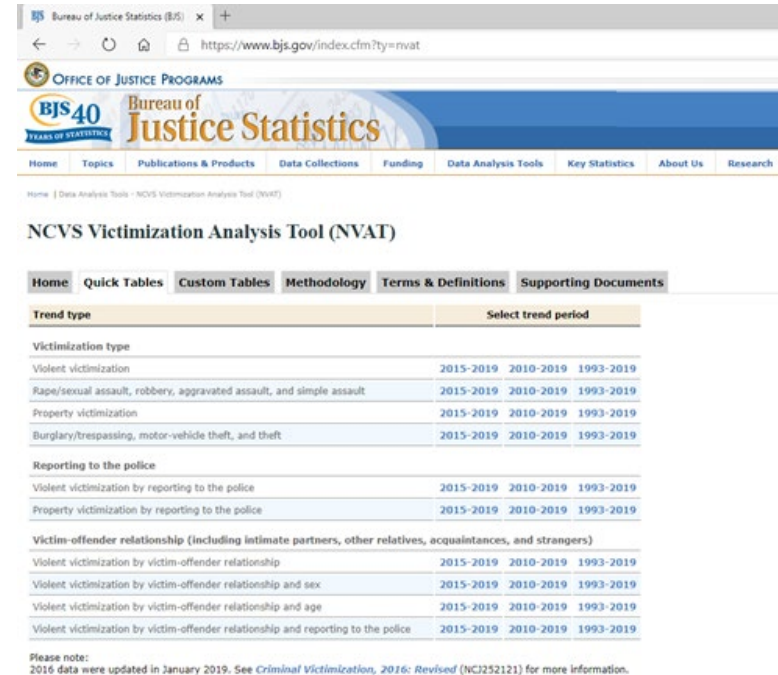
National Crime Victimization Survey (NCVS)

- Nation's primary source of information on criminal victimization.
- Collects information on rape/sexual assault, robbery, simple and aggravated assault, personal larceny, household burglary/trespassing, motor vehicle theft, other theft.
- Collects information on crimes reported and not reported to police.
- Ongoing since 1973.



NCVS Victimization Analysis Tool (NVAT)

- Prior to 2012, written reports and data files were the only ways to access NCVS data.
- In 2012, the NCVS Victimization Analysis Tool (NVAT) was released which provided online access to NCVS data starting in 1993.



The screenshot shows the Bureau of Justice Statistics (BJS) website interface for the NCVS Victimization Analysis Tool (NVAT). The page title is "NCVS Victimization Analysis Tool (NVAT)". The navigation menu includes: Home, Quick Tables, Custom Tables, Methodology, Terms & Definitions, and Supporting Documents. The main content area displays a table with the following structure:

Trend type	Select trend period		
Victimization type			
Violent victimization	2015-2019	2010-2019	1993-2019
Rape/sexual assault, robbery, aggravated assault, and simple assault	2015-2019	2010-2019	1993-2019
Property victimization	2015-2019	2010-2019	1993-2019
Burglary/trespassing, motor-vehicle theft, and theft	2015-2019	2010-2019	1993-2019
Reporting to the police			
Violent victimization by reporting to the police	2015-2019	2010-2019	1993-2019
Property victimization by reporting to the police	2015-2019	2010-2019	1993-2019
Victim-offender relationship (including intimate partners, other relatives, acquaintances, and strangers)			
Violent victimization by victim-offender relationship	2015-2019	2010-2019	1993-2019
Violent victimization by victim-offender relationship and sex	2015-2019	2010-2019	1993-2019
Violent victimization by victim-offender relationship and age	2015-2019	2010-2019	1993-2019
Violent victimization by victim-offender relationship and reporting to the police	2015-2019	2010-2019	1993-2019

Please note:
2016 data were updated in January 2019. See *Criminal Victimization, 2016: Revised* (NCJ252121) for more information.



NVAT, cont.

- NVAT produced tables only from a select set of NCVS variables.
- Given advancements in technology, by 2019, the NVAT had become dated.
- Result: A new data tool, NCVS Dashboard (N-DASH), was developed.

The screenshot shows the Bureau of Justice Statistics (BJS) website interface for the NCVS Victimization Analysis Tool (NVAT). The page title is "NCVS Victimization Analysis Tool (NVAT)". The navigation menu includes "Home", "Quick Tables", "Custom Tables", "Methodology", "Terms & Definitions", and "Supporting Documents". The "Quick Tables" tab is selected.

The main content area prompts the user to "Please select an option for the type of victimization". There are two radio button options:

- Personal Victimization**
Personal victimization includes all violent victimization (i.e., rape or sexual assault, robbery, aggravated assault, and simple assault) and personal theft.
- Household Victimization**
Household victimization includes all property victimization (i.e., burglary/trespassing, motor-vehicle theft, and theft).

A "Select Victimization Type" button is located to the right of the radio buttons.

Below the selection options, there are four input fields:

- Years:** 1993 - 2019
- Victimization Type *:** A list of checkboxes for "Violent Victimization" (Violent crime excluding simple assault, Rape/sexual assault, Robbery, Aggravated assault, Simple assault) and "Personal Theft/Larceny". A red asterisk indicates this field is required.
- First Variable:** View All Criteria
- Second Variable:** View All Criteria

At the bottom of the form, there are "Generate Results" and "Reset Form" buttons.



NVAT Custom Table Output

NCVS Victimization Analysis Tool (NVAT) Report

Number of violent victimizations by sex and race/Hispanic origin, 1993-2019
 Select: Numbers [Standard Error] | Rates [Standard Error] | Percent [Standard Error]

Victimization Type	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Violent victimization	16,822,618	17,059,005	15,202,202	14,059,520	13,425,406	12,010,551	10,600,716	8,502,602	7,476,599	7,424,550	7,679,050	6,726,060	6,947,795	8,430,430	6.8
Male	9,890,974	9,522,449	8,657,214	7,860,483	7,198,457	6,834,976	5,485,896	4,808,841	3,828,331	3,756,215	4,014,497	3,553,478	4,043,662	4,481,909	3.7
Non-Hispanic white	7,612,181	7,048,616	6,566,956	5,831,356	5,412,980	5,278,231	4,136,973	3,538,862	2,661,055	2,736,005	2,834,421	2,599,308	2,754,122	2,944,641	2.6
Non-Hispanic black	1,193,544	1,115,068	900,020	1,016,161	971,073	649,527	627,020	571,910	406,891	394,895	528,177	373,015	559,561	638,369	406
Non-Hispanic other	278,944	327,877	312,465	266,182	182,322	349,703	117,740	130,611	124,494	81,817	209,060	241,656	277,796	322,119	185
Hispanic	806,306	1,030,889	877,773	746,784	632,082	557,515	604,163	567,459	635,892	543,498	442,838	339,500	452,182	576,781	476
Female	6,931,644	7,536,555	6,544,987	6,199,037	6,226,949	5,175,576	5,114,820	3,693,760	3,648,268	3,668,335	3,664,553	3,172,582	2,904,133	3,948,520	3.0
Non-Hispanic white	5,125,350	5,699,401	4,577,453	4,659,471	4,587,555	3,765,655	3,743,522	2,681,567	2,498,306	2,696,626	2,655,467	2,249,287	1,997,030	2,541,659	1.9
Non-Hispanic black	1,037,165	997,126	1,085,022	752,264	939,576	770,006	897,427	524,182	585,822	628,934	447,725	464,202	353,076	655,803	591
Non-Hispanic other	204,775	170,458	154,939	128,651	141,864	181,801	127,657	71,024	152,486	77,919	199,594	177,159	184,513	323,050	252
Hispanic	564,355	669,570	727,574	658,652	557,955	458,114	346,214	416,987	411,654	264,857	361,768	281,934	369,515	428,008	294

Footnotes

- * Special tabulations from the NCVS Victimization Analysis Tool (NVAT).
- * Detail may not sum to total due to rounding and/or missing data.
- * Beginning in 2003, BJS implemented methodological changes to reflect new guidelines from the Office of Management and Budget for the



N-DASH Development



N-DASH Goals

- Reproduce the NVAT's functionality
- Increase the processing speed of analyzing NCVS data
- Add visualization elements to NCVS estimate displays
- Broaden the scope of data users
- Create a user-friendly solution





N-DASH Development

- BJS's team included staff from the Victimization Statistics Unit (VSU) and the Technology and Data Management Unit (TDM).
- RTI's team included data scientists, web and software developers, senior researchers, research statisticians, and a data visualization specialist.
- From 2019 to 2020, BJS developed a list of desired elements for the tool and worked RTI to finalize the content, layout and design of the tool.
- RTI created a draft version of the N-DASH on their development site.





N-DASH Development, cont.

Key decisions areas included –



Scope



Presentation



Content



Design



BJS

Bureau of Justice Statistics

N-DASH Development, cont.

- At BJS, staff from VSU,
 - conducted multiple rounds of testing in consultation with the full VSU,
 - discussed features, functionality, and structure with TDM to ensure compatibility within our environment, and
 - Shared and discussed the tool with BJS leadership.
- In Sept 2020, a fully-functional, initial iteration of the N-DASH was completed.
- After the initial version of the tool was finalized, staff from VSU continued making improvements.



N-DASH Development, cont.

- After the initial version of the tool was finalized, staff from VSU continued making improvements, including:
 - conducting additional user testing with BJS staff in different units,
 - participating in usability analysis testing with Verint, and
 - undergoing multiple rounds of revision and testing with RTI.
- During this time, BJS released a new agency website.



N-DASH Launch



To prepare for the N-DASH launch, the BJS's and RTI's teams worked with Office of the Chief Information Officer to:

- implement necessary changes,
- conduct several additional rounds of review and testing, and
- confirm that internal technical requirements were met to ensure a successful deployment of the data tool on the BJS website.

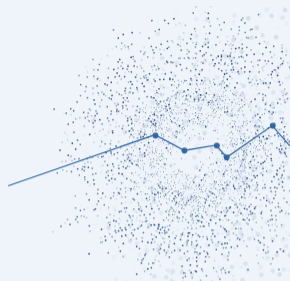




The N-DASH was launched in Nov 2021!



Bureau of Justice Statistics



NCVS Dashboard (N-DASH)

This dynamic analysis tool allows you to examine National Crime Victimization Survey (NCVS) data on both personal and property victimization, by select victim, household, and incident characteristics.

The NCVS is the nation's primary source of information on criminal victimization. It is an annual data collection sponsored by the Bureau of Justice Statistics. The NCVS collects information from a nationally representative sample of U.S. households on nonfatal crimes, reported and not reported to the police, against persons age 12 or older.

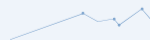
Site last updated: 11/10/2021



This tool

This tool presents estimates from the NCVS as interactive data visualizations, providing users with a variety of views and analysis types to investigate questions of interest. Click one of the links or tabs on this page to get started.

For more information, see:

[User's Guide](#)[Terms & Definitions](#)[Main NCVS page](#)

Tool Overview

An introduction to this tool's use, terms, and functions.



Quick Graphics

A selection of charts covering key topics of interest.

Or, head to



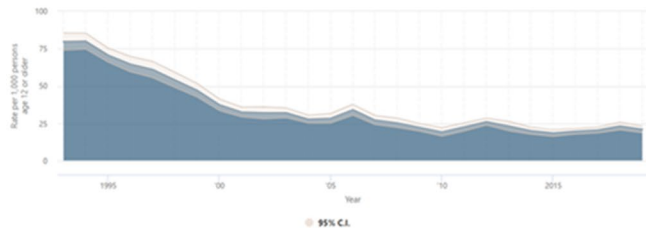
Custom Graphics

Create custom charts based upon selected topics of interest.



VIOLENT VICTIMIZATION

Violent Victimizations, 1993 to 2019

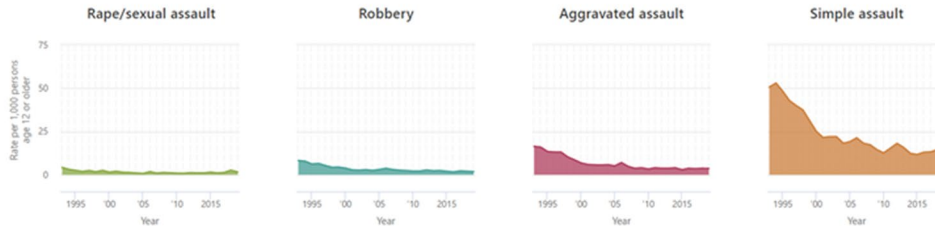


*95% C.I.: 95% confidence interval.
 *S.E.: Standard error.
 Source: Bureau of Justice Statistics, National Crime Victimization Survey, 1993 to 2019

[Show Table](#) [Download Table](#) [Download PNG](#)

N-DASH Quick Graphics

Rape/Sexual Assault, Robbery, Aggravated Assault, and Simple Assault, 1993 to 2019



*95% C.I.: 95% confidence interval.
 *S.E.: Standard error.
 Source: Bureau of Justice Statistics, National Crime Victimization Survey, 1993 to 2019

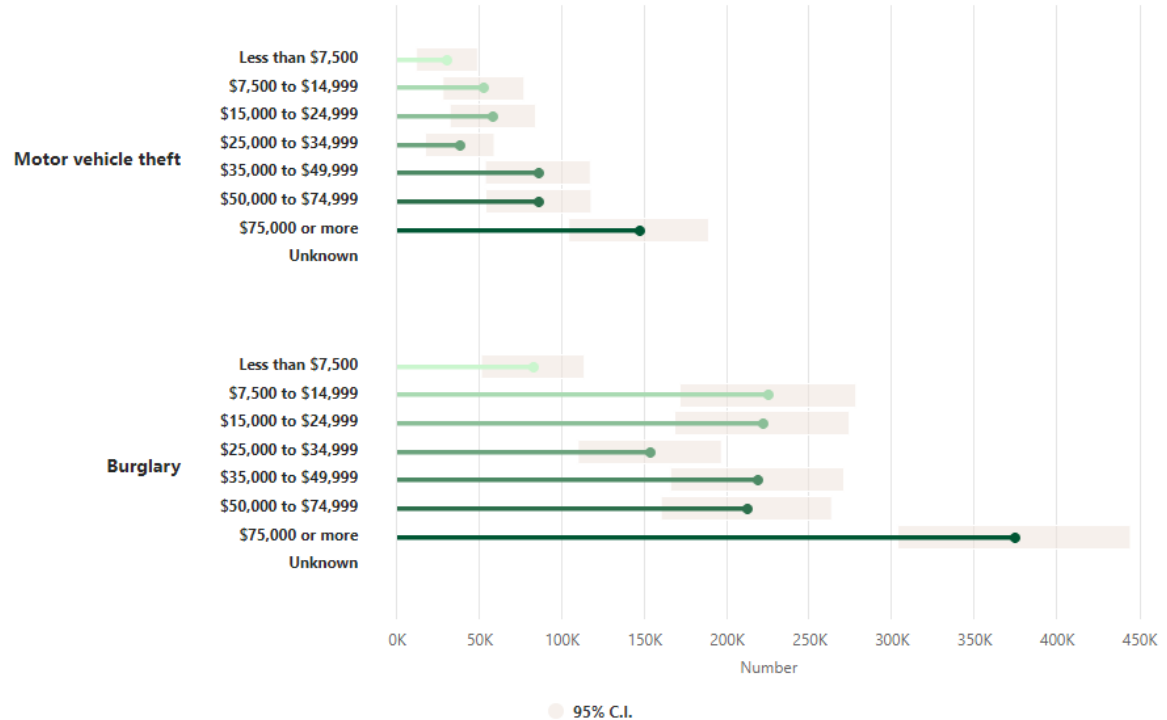
An individual larger chart view of any of these smaller comparison charts can be generated via custom graphics via the the multi-year-trends(characteristic view, by selecting 'person' under 'View Settings: VICTIMIZATION TYPE', and the crime type of interest under 'Data Filter Settings: CRIME TYPE'

[Show Table](#) [Download Table](#) [Download PNG](#)

N-DASH

Custom Graphic

Number of Victimizations by Crime Type by Household Income, 2019



95% C.I.: 95% confidence interval.

S.E.: Standard error.

Source: Bureau of Justice Statistics, National Crime Victimization Survey, 2019. <https://ncvs.bjs.ojp.gov/single-year-comparison/crimeType>



What's Next?

- Continuous improvement model to update the N-DASH
- Current additions under consideration:
 - NCVS variables (e.g. activity at time of crime)
 - NCVS supplement data (e.g. School Crime Supplement)
 - Other types of estimates (e.g. prevalence)



Resources

- N-DASH: <https://ncvs.bjs.ojp.gov/Home>
- NCVS: <https://bjs.ojp.gov/data-collection/ncvs>
- Other BJS data tools: <https://bjs.ojp.gov/data/data-analysis-tools>
- We welcome your feedback on our new tool! Send any comments or questions to AskBJS@usdoj.gov



Contact Us:

Erika.Harrell@usdoj.gov

Grace.Kena@usdoj.gov

Alexandra.Thompson@usdoj.gov



810 Seventh Street, NW, Washington, DC 20531 | Phone: +1 (202) 307-0765 | [**bjs.ojp.gov**](http://bjs.ojp.gov)