Theory development and crime prevention insights from the NCVS

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Abstract

The National Crime Victimization Survey (NCVS) has furnished US crime statistics and high quality data for theory development and policy insights for over fifty years. This paper highlights few of these achievements drawing on the development of criminological thinking with regard to measurement, and explanation of victimization and its concentration on a small minority of the population. It overviews lifestyle and the more encompassing environmental criminology theory for victimization, and explanations of multiple victimization, and the international crime drop that relied on NCVS data. Selected crime prevention insight and few recommendations for future research conclude the paper.

Background

Historically criminology was developed to study offending: why and arguably under which conditions few people commit crimes – actions, which perceived to threaten the smooth functioning of organised societies are prohibited and punishable by established laws (Sidebottom & Wortley 2016, p. 156). This is inherently divisive and offers a partial picture. It juxtaposes law-abiding victims of crime against offenders, who, however, are often victims (Jennings et al., 2010), and assumes that criminal law is generated via democratic processes, which equally represent and serve all society members and communities, although criminal justice may be biased against marginalized communities (Duxbury, 2021a; 2021b).

The cornerstone for crime prevention is measurement - identifying its extent, temporal and spatial variations, and other patterns – via systematically collected data. Such data (un)availability necessitated to some extent the field's historic focus on offending. Records collected for supporting police departments', and other criminal justice system (CJS) agencies' operations constituted the sole source for measuring the extent, and patterns of crime at *national level* until the 1970s (Addington & Rennison, 2014).

Police recorded crime statistics have been criticized due to under-reporting (by marginalized, lacking trust to, and/or fearful of the police communities), and substantial variations in recording procedures across police departments (Warner, 1931; Biderman & Lynch, 1991; Kershaw, 2008; Xie et al., 2024). In response to these well documented and widely acknowledged weaknesses in recorded crime data crime victimization surveys were developed (Aebi & Linde, 2014), to generate robust estimates of crime rates and trends, especially for high volume crimes, and rich supplementary information about: victims' crime

experiences, police reporting and satisfaction; the general population's perceptions and attitudes about crime, disorder, the police, and the CJS; and detailed demographic, socio-economic and other factual information about survey respondents, their household and neighbourhood. This information, has provided the foundations for theory development, especially on victimization; fear of crime; and legitimacy of, and trust in the police and the CJS. However, the focus on offending permeated into the first attempts to study victimization, most notably the lifestyle and victim proneness theories.

The National Crime Survey (NCS) is the oldest national crime survey in the world since 1972. Originally conceived as a means to acquire national level, and most importantly independent of police records, estimates of crime rates in the USA, the NCS and the redesigned National Crime Victimization Survey (NCVS)[1] has furnished criminological, and, in particular, victimization theory development from the outset.

The present paper overviews selected NCVS - based efforts in developing new and/or informing already existing theories, touching upon the following: lifestyle victimization theory, which merged with social disorganization theory informs environmental criminology; victim proneness; repeat victimization; and crime drop explanations. These NCVS-informed theoretical insights are presented within victimization measurement that researchers sought to explain, and within this by applied methodology. Organizing the paper's structure around measurement and methodology arguably highlights how criminological thinking to explain victimization evolved, and may support (a) NCVS questionnaire design analysts, and (b)

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[1] Both NCS and NCVS will be referred to as NCVS, henceforth, for economy.

researchers in developing additional tools and new theoretical and crime prevention insights in future.[2] After having overviewed patterns of criminal victimization, the paper ends with a discussion of some already suggested crime prevention insights from NCVS studies, and tentative recommendations for future NCVS-based research.

Crime Victimization: Measurements, methods, and theoretical insights

Introduction

The NCVS since the 1970s in the USA (Hindelang et al., 1978) and the other national crime victimization surveys that followed elsewhere (1981 in the UK), deviating from police crime reports, have offered an entire new set of crime statistics, and crime rates that measure the extent and patterns of the majority of victim-based crime types, and the impact of crime on victims, their families or households, and communities. Some of these have gradually found their way into national and/or official crime statistics and, of relevance here, have become the basis for developing new theories, as well as testing, and improving existing ones.

Incidence rates and the crime drop

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[2] This is by no means an exhaustive account of the array of theoretical approaches and testing that utilized NCVS data or an in depth theoretical and policy interpretation of findings from the substantive perspectives that this paper does cover. Therefore, interested readers who aspire to contribute to victimization theory development, and/or add to the armoire of crime prevention insights are encouraged to access the original studies.

NCVS-based crime incidence rates (number of crimes per 1000 members of the exposed

population)[3] provide an alternative and, arguably, more complete picture of national crime

levels than police recorded crime rates for comparable offences (Biderman & Lynch, 1991).

They are produced annually and included in published official crime statistics, sometimes

alongside police recorded crime rates. Furthermore, NCVS-based incidence rates are the

most reliable source for investigating crime trends, especially for volume crimes, owing to

consistent data collection methodology over time and, when occurring, well-documented

and rigorously tested improvements (Lynch & Addington, 2007).

Analyses of the NCVS crime incidence rate trends have illuminated the crime drop of the last

forty years in the USA (Rosenfeld, 2007) and, via cross-national comparisons with data from

consistently continual crime surveys elsewhere, what may explain it (van Dijk & Tseloni,

2012; Farrell et al., 2014). Sustained sharp falls of NCVS incidence rates[4] - first, in property

crimes, notably burglary and theft since the 1980s, followed by motor-vehicle theft and

violence in the early 1990s (Catalano, 2006; Rand et al., 1997) - furnished numerous studies

on explaining this novel at the time phenomenon. Early falling crime trends' analyses

focussed exclusively on US demographic changes and domestic policies (Barker, 2010).

However, the crime drop, after being first manifested in US NCVS rates, occurred in many

other industrialized countries about a decade later, since the 1990s (Tseloni et al., 2010a).

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[3] This is also referred to as victimization rate in NCVS analyses (Lauritsen & Rezey, 2013).

[4] Contrasting the NCVS trends, UCR upwards crime trends arguably indicated greater police crime recording

rather than more crimes during the first period of the US crime drop (Rosenfeld, 2007) but later years' UCR

lagged NCVS downward trends, confirming the US crime drop (Farrell et al., 2014).

Thus the phenomenon has justifiably been recognized as the international crime drop (van Dijk et al., 2012).

International phenomena call for explanations that spread across individual countries' jurisdictions, demography, policing, legal systems, and other candidate causes constrained within national borders. A new set of studies looking beyond, whilst incorporating US data, sought to explain the crime fall and how to sustain it. The international crime drop is arguably the result of widespread societal changes in crime opportunities and exposure (Farrell, 2013): the key assumption of the security hypothesis for the crime drop (Farrell et al., 2011). The security hypothesis has to date been confirmed for vehicle crime falls in studies from a number of different countries, including the USA (Farrell et al., 2014; Fujita & Maxfield, 2012). Relying on NCVS data on recovery rates for stolen cars to distinguish between temporary and permanent thefts, Fujita & Maxfield (2012) concluded the following: Vehicle crime falls were the result of considerable declines in temporary thefts, which are driven by opportunity. In addition, increases in cars with in-built security followed temporary car theft falls over time. The security hypothesis for burglary has been confirmed in several countries and recently been tested in the USA (Farrell et al., 2014; Farrell, 2022).

The timing of these falls across crime types, starting with property crime declines and followed by violence falls, which was observed in NCVS and cross-national data (van Dijk & Tseloni, 2012; Tseloni et al., 2012; 2010a), led to the debut crime hypothesis which complements the security hypothesis for the crime drop (Farrell et al., 2014; 2015). "Changes in the levels of much-occurring types of property crimes such as car-related thefts and burglaries have had domino effects on other types of crime, for example by … not

offering learning experiences to new cohorts of habitual offenders or reducing criminogenic

opportunities associated with stolen goods markets and transactions" (van Dijk & Tseloni,

2012, p. 33). Indeed, NCVS car theft and 2-year lagged violence rates over the period 1976–

2005 portray an incredibly strong correlation (Farrell et al., 2014).[5]

Prevalence: Victims and non-victims

NCVS (and generally crime victimization surveys) records about whether respondents were

victims or non-victims during the reference period have furnished the oldest victimization

measurement, which still is extensively analyzed, for informing theory: national crime

prevalence rates (number of victims per 1000 members of the exposed population) and

individuals' victimization risk (averaging likelihood of victimization per person or household).

This dichotomy has been the focus of studies that founded the lifestyle victimization theory,

and informed social disorganization theory, and environmental criminology.

NCVS data provide valuable information about: the circumstances, if known by victims,

surrounding distinct or series victimization events; characteristics, routine activities, crime

experiences and perceptions of respondents - who comprise all household members in

survey selected housing units, a unique feature of NCVS - and their households; their homes'

features; and to a small degree their area of residence, notably population density and

administrative classification. Furthermore, the last allows linking of NCVS data across

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[5] Since the NCVS cannot support estimates of the age-crime curve, further investigation of the debut crime

hypothesis has relied on arrest data (portraying a clear pattern of increasing onset and peak offending age, and

reduced offending frequency across successive cohorts, Farrell et al., 2014; 2015).

administrative data on a wide range of area socio-demographic, criminal justice, and spatial characteristics to explore individual and contextual risk and protective factors of criminal victimization (Tseloni et al., 2018). The sum of this information speaks to opportunity theory (Mayhew et al., 1976; Felson & Clarke, 1998) and environmental criminology (Andresen, 2010; Wortley & Mazzerole, 2008) originally applied to spatio-temporal and modus operandi crime analyses.

Broadly speaking, the exposure model (the victimization flipside of opportunity regarding offending decision-making) suggests that the probability of victimization is a function of the amount and type of interaction of individuals (or objects) with high risk coordinates. Its origins lie in the two well-rehearsed and compatible assertions: lifestyle theory (Hindelang et al., 1978); and routine activities theory[6] (Cohen & Felson, 1979). Commonalities between lifestyle and routine activities led from early on to their merging into one (Garofalo, 1987; Gottfredson, 1981). Over the years routine activities theory has evolved (Felson, 2002; 2006), become the dominant individual–level victimization theory, and tested in numerous studies on various crime types based on, among others, NCVS data.

Lifestyle theory

The first major theory that originated from NCVS data analysis, which in its guise and consolidation with routine activities theory and is still relevant today, is the lifestyle theory. Based on cross-tabulations of respondents' personal characteristics (gender, age, race,

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[6] Routine activities theory was initially developed based on time series analyses of aggregate police recorded property crimes and economic activity official data (Cohen and Felson, 1979).

income, marital status, education, and major activity, in other words occupation) with three outcome binary (0/1) variables: experience of personal victimizations; whether they sustained injury; and whether they lost property. Hindelang et al. (1978) proposed that personal characteristics indicate individuals' lifestyles: the way in which people allocate their time to vocational and leisure activities. These influence their exposure to situations entailing high victimization risk. Exposure is influenced by the amount of time people spend in public places at night or early morning hours, because according to lifestyle theory potential offenders also tend to favor these spatio-temporal coordinates. Personal characteristics influence victimization risk via two avenues: lifestyles, which are the result of attitudes, and adaptations to structural constraints and role expectations[7]; and associations, that is social contacts, which occur among people with similar characteristics and interests.

Socio-demographic characteristics can predict role expectations and behavioral constraints (economic, familial, educational, and legal) imposed by social structure. These factors are inter-related, leading through individual and subcultural adaptations to particular lifestyles. Lifestyle variations influence the probability of being on specific places at specific times and coming into contact with potential offenders. Thus, these variations determine both directly, and via associations, exposure to situations with high victimization risk under certain conditions, including offenders' perceived convenience, target desirability, and vincibility. Therefore, lifestyle theory was modified to incorporate routine activities and reactions to crime (Garofalo, 1987; Gotfredson, 1981).

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[7] For example, domain – specific victimization explanations (Lynch, 1987; Mustaine, 1997).

Despite its limitations[8] lifestyle theory recognized and documented communication of victimization risk across household members, and multiple victimization – both key themes for theory development and crime prevention. Hindelang et al. (1978) defined multiple victimization as the probability of being a victim of both personal and household crime (see penultimate section). Individual and contextual predictors of multiple victimization (the above defined joint risks by Hope et al., 2001, and across different periods by Ellingworth et al. 1997) were investigated some 20 years later with BCS data. Another lasting contribution to wider criminological thinking was the introduction of the role of offenders' target perceptions. Opportunity theory and situational crime prevention scholars expanded this, and developed a typology of perceived target attractiveness and risk (Cornish & Clarke, 1986).

Lifestyle/routine activities and social disorganization

The perspective of individuals' exposure to crime expanded via statistical modelling including multiple predictors that arguably allowed separating causes and mediating factors, and from incorporating area characteristics from other data sources, notably the Census (Osborn et al., 1992). Marrying individuals' (micro-level) lifestyle/routine activity - related crime exposure and neighborhood (meso-) level social disorganization measurements of local crime rates contributed to further our understanding of victimization from an environmental criminology perspective (Felson, 2006; Miethe & Meier, 1994).

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[8] The lifestyle theory with its emphasis on personal crime in public spaces during the night overlooks domestic violence (Jensen & Brownfield 1986; Worrall & Pease 1986), vilifies non-Anglo-Saxon lifestyles, and entails victim blaming (Averdijk, 2017).

Methodologically this development was facilitated from linking NCVS (notably, Lauritsen (2001) and her ensuing collaborative work) and other national victimization survey data, to respective countries' contextual administrative and Census data (Ellingworth et al., 1997; Kennedy & Forde, 1990). So created multilevel[9] data and victimization predictors open up possibilities for investigating varying exposure (due to the same activity or characteristic) across contexts via interactions between individual and area effects.

Contextualized and/or studied alongside income individuals' ethnicity effects on victimization contradict the original lifestyle theory proposition of increased risk (which had been established without considering household and/or community affluence). NCVS statistical modelling controlling for individual characteristics, routine activities, and neighborhood socio-economic profile evidenced that: Blacks face higher violence victimization risk because they live in disadvantaged central-city neighborhoods, which when controlled for in fact Blacks face lower risk than others (Lauritsen, 2001, pp. 14, 19); non-stranger violence risk among ethnic minority males and females is actually lower than that for White and Black females who have similar risk; and stranger violence risk is highest for White males, reversing overall risk estimates, followed by Black males, whilst all other race by gender groups have (statistically) similar risks (Lauristen & White, 2001, p. 48).

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[9] It should be clarified that studies relying on multilevel data and predictors do not necessarily employ multilevel (hierarchical) statistical models. Multilevel statistical analyses of NCVS data account for the data clustering of individuals within households, and households within census tracks, thereby exploring questions about communication of risk between members of the same households and/or of the same areas of residence (see penultimate subsection).

Jumping ahead to multiple victimization insights (next section), Asian/Pacific Islanders experience significantly fewer personal crimes than Black, Native, and White Americans who effectively face similar numbers (Tseloni, 2000, pp. 427; Tseloni & Pease, 2004, p. 939). Lack of increased and even reduced ethnic minority victimization by property and personal crimes has been evidenced outside the USA (Tseloni et al., 2002; 2004; Tseloni & Pease, 2014).

Multiple victimization: measurements and impact

NCVS - and in general national crime survey - based crime incidence rates' exceedance of prevalence rates has exposed the phenomenon of multiple victimization (two or more crimes per victim). The original terminology of "multiple victimization" encompassed the following four distinct ways of crime recurrence against the same victims (Sparks, 1981; Tseloni, 2014). The currently accepted definition of *multiple victimization* infers that the same victim experienced two or more different crime types on different occasions - for example, a bag-snatching and a burglary. Two or more crimes of the same offence type (for example, three burglaries) at separate instances is commonly termed *repeat victimization*. *Series*, also known as *high volume repeat*, *victimization* is when repeat crime incidents are too similar, too many to distinctly remember each one in detail, and/or have a degree of periodicity – for example, vandalism outside residences in a neighbourhood near a football stadium after each match (Pease, 1998; Tseloni, 2014). Finally, composite crimes (for need of a better term) is when more than one offences occur during a single incident (Sparks, 1981; Tseloni et al., 2010b).

The phenomenon of multiple victimization was observed and documented by early NCVS studies, but not systematically measured or statistically modelled over potential explanatory factors (until about two decades later). Indeed, Reiss' (1980) and Sparks' (1981) early NCVS studies were concerned with a small proportion of victims, and an "insignificant" minority of respondents, who reported two or more crimes of the same (i.e., repeat victimization) or different (currently accepted definition of multiple victimization) offence type at separate instances in the reference period. In a seminal study Reiss (1980) produced the NCVS matrix of multiple victimization, which portrayed repeat victimization in the diagonal, and multiple victimization in the off-diagonal cells. The matrix of multiple victimization demonstrates the connections between crime types and their temporal sequence, albeit only between first and second victimization event within the reference period.

Repeat (which in the case of aggregate crime types may well be multiple when considering crime type specificity) victimization is reflected in the higher crime incidence rates compared to prevalence rates. Repeat crimes contribute disproportionally to overall national or local crime rates: high crime areas have fewer victims, and each victim is more often victimized than chance would predict (Trickett et al., 1992).[10] The extent of crime inequality over the general population and victims (Tseloni & Pease, 2005), and the incredible value of tackling repeat victimization for crime prevention (Farrell & Pease, 1993) was first emphasized during a highly successful burglary prevention initiative in the UK (the Kirkholt project, Forrester et

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[10] British Crime Survey (BCS) data have furnished the bulk of original research on multiple and repeat victimization and crime counts statistical modelling (see penultimate subsection).

al., 1990). Farrell and colleagues relying on British Crime Survey (BCS)[11], NCVS, and other crime survey data showed that repeat victimization is a cross-national problem, and not limited to Northern English public housing (council estates) (Farrell & Bouloukos, 2000; Farrel et al., 2001; 2005).

Knowing how crime is distributed over the exposed population is immensely important from the point of view of crime inequality, and distributive justice, and offers a more holistic picture of specific causes and impact of crime to inform crime prevention (Hunter et al., 2021; Pease, 1998). This necessitates unpacking the restricting view of multiple and repeat victims as those who experience two or more crimes and examine the entire distribution of crime counts, i.e., 0, 1, 2, …, up to the maximum number of crimes per member of the exposed population.

Although repeat victimization is entailed within incidence rates, due to its importance for crime prevention it is measured via a new set of crime statistics in the last forty years: repeat crime rates (number of crimes that were repeats per 1,000 exposed population), repeat victim rates (number of repeat victims per 1,000 exposed population), and crime concentration (mean number of crimes per victim) (respective calculation methodology provided by Farrell & Pease, 1993; Tseloni & Pease, 2005). The first two are routinely published crime statistics (additionally, to prevalence and incidence rates) whilst

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[11] The BCS is now called Crime Survey for England and Wales (CSEW) but due to the historic focus the BCS/CSEW is referred to as BCS throughout this study.

victimization counts are truncated at the 98th percentile per crime type in the UK (ONS, 2019).

In the US NCVS–based repeat victimization measurements have informed justice statistics on an ad hoc basis and usually in relation to series violent victimization. Taking a fresh look, Planty & Strom (2007) revisited NCVS counts of series violent victimization, concluding that their inclusion creates extreme variability on annual crime estimates but their current truncation distort the patterns and, subsequently potential prevention efforts, of violent victimization. A special Bureau of Justice Statistics (BJS) report on repeat violent victimization trends highlighted their contribution to overall crime rates - repeat violence victimization fell by 62% between 1993 and 2014 – and the swift recurrence, within 6 months, after an initial incident (Oudekerk & Truman, 2017). Publication of U.S. official statistics on prevalence and incidence rates in tandem arguably balances between high randomness of annual crime rates incorporating series counts and attention to violence victims (Planty & Strom, 2007), especially when adjusting the BJS counting rule of truncating the number of crimes per series at 10 (rather than 1) incidents per 6 month reference period (Lauritsen et al., 2012).

Explanations of multiple victimization

Victim proneness

Extending Reiss' work, Sparks (1981) coined the term victim proneness to explain multiple victimization. To this end, he looked at potential characteristics distinguishing respondents who reported 0, single, multiple or recurrent crime victimization events, and proposed a theoretical model of victim precipitation or vulnerability (Sparks, 1981; 1982). Individuals

have certain degrees of proneness at particular times due to their social, psychological, economic, cultural and spatio-temporal characteristics. Variations in victimization *rates* may be explained by the victim's behavior, attributes or social position via the following mechanisms: precipitation; facilitation; (ecological, status and/or role) vulnerability; opportunity (exposure); attractiveness; and impunity.

Sparks' victim proneness approach attributes a sequence of various degrees of culpability to victims (Gottfredson, 1981), which combined with estimation methodological challenges (Nelson, 1980; Sparks, 1982; Ybarra & Lohr, 2002), arguably, interrupted NCVS - based study of multiple victimization until the turn of this century. Despite its clear message of victim blame and transplanting theoretical thinking about offending into victimization, Sparks' (1981; 1982) work highlighted the phenomenon of multiple victimization, recognized that differences in victimization rates (rather than risks) are not random, and that individuals may face victimization spells. All three elements form part of current accepted victimization thinking.

The epidemiology of (repeat) victimization

A body of research, which originated with BCS data in the late 1990s, shifted the focus away from victimization risk to incidence (mean number of crimes per respondent) to investigate risk and protective factors of both single and repeat victimization rather than the victim/non-victim dichotomy (Tseloni, 1995; Osborn & Tseloni, 1998 – the latter with multilevel predictors from BCS and UK Census data). Repeat victims have the same only more risk and less protective factors than single victims (Osborn et al., 1996; Sparks, 1982) and, therefore, examining the entire distribution of crime counts per respondent provides a

more encompassing picture, and may direct crime prevention resources where most needed (Tseloni et al., 2002).

Repeat victimization may be due to: population heterogeneity, whereby individuals have constant but unequal expected victimization counts; state dependence (or event dependence in UK English), whereby individuals have the same initial risks but these change after each subsequent victimization event; and/or spells, namely, periods during which unusually large number of crimes occur (Tseloni, 1995).[12] In this light, victimization risk

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[12] The first two explanations are, respectively, apparent and true contagion in epidemiology (Xekalaki, 1983). To the author's knowledge, initial NCVS crime counts' modelling over respondents' characteristics provided invaluable insights on repeat victimization (Lynch et al., 1998). It employed the Poisson specification, which, assumes that crimes occur randomly. However, whilst the vast majority are non-victims, gradually fewer respondents experience progressively more crimes, an indication that crime repetition is not random (Pease, 1998; Tseloni, 1995). The negative binomial specification reflects the non-randomness of crime repetition (Cameron & Trivedi, 1986; Tseloni, 1995). Therefore, the negative binomial regression was originally introduced for BCS crime counts modelling (Osborn & Tseloni, 1998; Tseloni, 1995) and soon thereafter employed on NCVS and cross-national data (Tseloni, 2000; Tseloni et al., 2004). Theretofore, it has become standard crime counts' modelling methodology (Osgood, 2000). However, the negative binomial specification is restricting: although it fits with repeat victimization theoretical explanations, the probability of each subsequent event (state dependence) within the reference period follows the Gamma distribution formula. Other possible statistical models for predicting state/count - specific repeat crime probability are hurdle and finite mixture Poisson specifications (Wang et al., 1998). Testing the hypothesis of state dependence, which was originally introduced to examine delinquents' victimization (Lauritsen & Davis-Quinet, 1995) prior to NCVS data (Lynch et al., 1998; Tseloni & Pease 2003; 2004), requires longitudinal data. The final explanation of repeat victimization, spells, has not been investigated to date outside police analyses (Bowers & Johnson, 2005).

statistical analyses inform population heterogeneity (see sections on prevalence and victim proneness) but cannot speak to state dependence. Summing up the repeat victimization explanations, the number of crimes experienced (0, 1, 2, 3 … up to a maximum) can be predicted from: individual and contextual risk and protective factors, and their interactions, which speak to the theoretical explanation of population heterogeneity; the outcome of each preceding victimization incident, which reflects state dependence; and, via random effects, the conditioning of risk and protective factors by context (Tseloni, 2006) and by victimization history (Tseloni & Pease, 2004).

Modelling of NCVS data towards the turn of the century built upon Nelson's (1980) work and expanded the original BCS-based statistical modelling of crime counts for informing population heterogeneity and, therefore, environmental criminology (Tseloni, 1999). The NCVS longitudinal component of following respondents for three and a half years with six-monthly interviews enabled unique insights about the relative importance of heterogeneity and state dependence explanations of repeat victimization (Tseloni & Pease, 2003; Lynch et al., 1998). Furthermore, NCVS sampling of all household members 12 years old or older[13] facilitated hierarchical negative binomial modelling of victimization incidence for estimating communication of victimizations between household members (Tseloni, 2000) and

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[13] The NCVS feature of interviewing all household members has allowed invaluable insights, for example, into domestic violence (Xie et al., 2012).

conditioning[14] of risk and protective factors across households and repeat victimization state (Tseloni & Pease, 2004).

The take out lessons from this work are the following. Both population heterogeneity and state dependence are important predictors of crime repetition with arguably some household characteristics exerting a stronger effect than previous victimization (Lynch et al., 1998; Tseloni & Pease, 2003). Indeed, the effect of preceding victimization to the next one is moderated from individuals' characteristics and routine activities, especially during shorter periods when these are likely to be stable (Tseloni & Pease, 2003, p. 207). Therefore, population heterogeneity estimates overlooking state dependence are valid reflections of risk and protective factors for guiding prevention. Furthermore, the models confirmed offender interviews' results that "[state] dependence is contingent on what is elusive about the individual", and therefore, it "is triggered by non-obvious characteristics of victims" that become known after an offending attempt (Tseloni & Pease, 2003, p. 209 & 210, respectively). State dependence effects in the short-term (6-12 months) are accentuated for individuals who already face elevated number of victimizations from routine activities and differ across areas with different population density and urbanization (Tseloni & Pease, 2004).

Discussion, crime prevention insights, and suggestions

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[14] This differs to interaction effects as it allows estimating a set of diverging slopes of individual effects across households and repeats.

Owing to consistent, transparent, and rigorously tested methodology, NCVS has supplied

crime official statistics, which offer a clearer picture of crime problems in the USA than

police records. The NCVS entered victims of crime, their profiling, experiences, perceptions,

and attitudes in relation to crime and the criminal justice system in this picture. It is the first

national crime survey in the world - other countries followed in establishing and fashioning

such surveys after the NCVS, albeit with varying periodicity and methodological consistency

(Aebi & Linde, 2014).

The previous sections of this study presented select examples of NCVS contribution to the

development of criminological thinking. The unexpected long-term and sustained

international crime drop started in the USA, and was first recorded in NCVS rates. Multiple

victimization was originally documented in NCVS data. Lifestyle victimization theory (now

considered part of the wider environmental criminology perspective) and victim proneness,

both attempting to explain victims' crime experiences were founded on NCVS data.

Furthermore, NCVS linked with Census data contributed to informing environmental

perspectives of victimization, and thus "correcting" original lifestyle assertions, especially in

relation to race and ethnicity (which were arguably skewed by offending crime perspectives,

themselves based on CJS data). The NCVS longitudinal element and inclusion of all

households members of selected housing units contributed to informing: communication of

victimization rates between household members; the interplay between influence of

preceding on subsequent victimization, on one hand, and individual and contextual risk and

protective factors, on the other; and conditioning of routine activity effects across different

contexts.

What are the most important lessons from this narrow (considering NCVS theory development uses not overviewed here) body of work? The NCVS longitudinal survey design and wealth of fixed and time varying respondents', and their households' characteristics, routine activities, and areas of residence is ideal for studying victimization pathways and their conditioning by contextual factors. Potential insights on "when, for whom, in what context, and with respect to which crime type" may inform cost effective prevention with lasting benefits. Snippets of the above all-encompassing wish-for evidence have been provided by existing NCVS research overviewed here.

Crime prevention initiatives can turn lifestyle and victim proneness theories' victim blaming on its head to create the means for preventing initial and subsequent victimizations. For example, guided by victim proneness classifications establish initiatives for awareness campaigns via vulnerable populations' self-organized support groups, re-organize police units with representation of vulnerable populations, and/or expand public health approaches of criminal victimization. For example, overt or invisible disability is associated with elevated victimization rate (Harrell, 2017) and is the top risk factor in statistical models of crime counts (Hunter et al., 2021) allowing prevention via health services and professionals. Consistently evidenced individual and household victimization risk factors are readily available in national and/or local authority official statistics, and, therefore, can be used for prioritizing crime prevention (Hunter et al., 2021; Tseloni & Pease, 2003).

Victimization risk awareness campaigns should be gender, age, and context - specific but there is no evidence that they should target particular ethnicity members. Furthermore, crime prevention initiatives, including victims' and survivors' services, should focus on areas

of high socio-economic deprivation and developed in partnership with local residents'

organizations and other voluntary sector agencies (Lauritsen & White, 2001). Since offenders

also disproportionally live in high poverty areas, such initiatives may succeed to reduce

offending without framing and/or retribution (Jackson et al., 2022).

Repeat victimization measurements should inform the US picture of crime alongside

prevalence and incidence rates in regular BJS crime statistics publications. The overall crime

reducing power of investing resources in protecting known victims, and their households

from subsequent victimizations (and doing so within a short time window) should be

included in crime prevention agencies' philosophy, and practitioners' training and routine

operations. Such an example is the (former) Arizona State University (ASU) Center for

Problem-Oriented Policing (POP)'s tool on repeat victimization, which consolidated

knowledge from across the world, including the NCVS (Weisel, 2005). Police response

prioritizing, first, victims and their households immediately after they experienced crime,

and, second, those with similar characteristics and routine activities living near them (Lynch

et al., 1998; Tseloni & Pease, 2003).

A relatively newly suggested use of NCVS and other reputable crime surveys is estimating

crime harm based on victims' own report of psychological, financial, physical health, and

other damage they and members of their family, households, and communities incurred as

result of victimization (Ignatans & Pease, 2016; Planty & Langton, 2025). Victim-centered

crime harm based on psychological, physical, and financial crime consequences would be an

additional avenue to prioritize crime response and prevention and arguably further inform

sentencing guidelines and present crime harm indices (Klaus et al., 1984; ONS 2021;

Sherman et al., 2016).

Finally, making use of NCVS longevity to investigate wide societal changes during the crime

drop – such as whether routine activity changes may be responsible for reductions in

violence and repeat violent victimization, whether homes' security improvements or uptake

brought about domestic burglary falls, and/or computer enabled crime and cybersecurity

trends - would complement existing research on national trends. Most important, it will

expand knowledge on the international crime drop, which started in the US a decade before

elsewhere, and provide valuable insights to further develop environmental crime

prevention.

References

Addington, L.A. & Rennison, C.M. (2014). US National Crime Victimization Survey. In G. Bruinsma & D. Weisburd (Eds. in Chief) *Encyclopaedia of Criminology and Criminal Justice (ECCJ)* (pp. 5392-5401). New York, NY: Springer-Verlag. DOI:10.1007/978-1-4614-5690-2_448.

Aebi, M.F. & Linde, A. (2014). National victimization surveys. In G. Bruinsma & D. Weisburd (Eds. in Chief) *Encyclopaedia of Criminology and Criminal Justice (ECCJ)* (pp. 3228-3242). New York: Springer-Verlag. DOI:10.1007/978-1-4614-5690-2_445.

Andresen, M.A. (2010). The place of environmental criminology within criminological thought. In M.A. Andresen, P.J. Brantingham, & J.B. Kinney (Eds.), *Classics in environmental criminology* (pp. 5-28). Boca Raton, FL: Taylor & Francis.

Averdijk, M. (2017). Victim selection. In W. Bernasco, J.-L. van Gelder & H. Elffers (Eds.) *The Oxford Handbook of Offender Decision Making*, Oxford University Press.

Barker, V. (2010). Explaining the great American crime decline: A review of Blumstein and Wallman, Goldberger and Rosenfeld, and Zimring. *Law & Social Inquiry*, 35(2), 489-516. DOI: 10.1111/j.1747-4469.2010.01192.x.

Biderman, A.D. & Lynch, J.P. (1991). *Understanding crime incidence statistics: why the UCR diverges from the NCS*. Springer: New York.

Bowers K. J. & Johnson S. D. (2005). Domestic burglary repeats and space-time clusters: The dimensions of risk. *European Journal of Criminology*, 2(1), 67–92. DOI: 10.1177/1477370805048631.

Cameron, C.A. & Trivedi, P.K. (1986). Econometric models based on count data: Comparisons and application of some estimators and tests. *Journal of Applied Econometrics*, 1(1), 29-53. DOI: 10.1002/jae.3950010104.

Catalano, S.M. (2006). *National Crime Victimization Survey: Criminal victimization, 2005*. Bureau of Justice Statistics Bulletin. NCJ 214644. US Department of Justice. Office of Justice Programs.

Cornish, D.B., & Clarke, R.V.G. (1986). *The reasoning criminal*. New York: Springer-Verlag.

Van Dijk, J. & Tseloni, A. (2012). Global Overview: International trends in victimization and recorded crime. In J. van Dijk, A. Tseloni & G. Farrell (Eds.) *The International Crime Drop: New Directions in Research* (pp. 11-36). Hampshire: Palgrave Macmillan. ISBN: 978-0-230-30265-5.

Duxbury, S. W. (2021a). Fear or loathing in the United States? Public opinion and the rise of racial disparity in mass incarceration, 1978–2015. *Social Forces*, 100(2), 427–453. DOI: 10.1093/sf/soaa112.

Duxbury, S. W. (2021b). Who controls criminal law? Racial threat and the adoption of state sentencing law, 1975 to 2012. *American Sociological Review*, 86(1), 123–153. DOI: 10.1177/0003122420967647.

Ellingworth, D., T. Hope, D.R. Osborn, A. Trickett and K. Pease (1997). Prior victimization and crime risk. *International Journal of Risk, Security and Crime Prevention*, 2, 210-214.

Farrell, G. (2013). Five Tests for a Theory of the Crime Drop. *Crime Science*, 2(5), 1-8. DOI: 10.1186/2193-7680-2-5.

Farrell, G. (2022). Forty years of declining burglary in the United States: Explanation and evidence relating to the security hypothesis. *Security Journal*, 35(1), 444-462. DOI: 10.1057/s41284-021-00284-4.

Farrell, G. & Pease, K. (1993). *Once bitten, twice bitten: Repeat victimization and its implications for crime prevention*. Crime Prevention Unit Paper 46. London: Home Office.

Farrell, G. & Bouloukos, A.C. (2000). A cross-national comparative analysis of rates of repeat victimization. *Crime Prevention Studies*, 12, 5-25.

Farrell, G., Tseloni, A., Wiersema, B. & Pease, K. (2001). Victim careers and 'career victims'? In G. Farrell, & K. Pease (Eds.) *Studies on Repeat* Victimization (pp. 241-253). Crime Prevention Studies, vol. 12, NY: Criminal Justice Press.

Farrell, G., Tseloni, A. & Pease, K. (2005). Repeat Victimization in the ICVS and NCVS. *Crime Prevention and Community Safety: An International Journal*, 7, 7-18.

Farrell, G., Tseloni, A., Tilley, N. & Mailley, J. (2011). The Crime Drop and the Security Hypothesis. *Journal of Research in Crime and Delinquency*, 48(2), 147-175. DOI:10.11177/0022427810391539.

Farrell, G., Tilley, N. & Tseloni, A. (2014). Why the crime drop? *Why Crime Rates Fall and Why They Don't, Crime and Justice-A Review of Research*, 43, 421-490. Chicago: University of Chicago Press.

Farrell, G., Laycock, G. & Tilley, N. (2015). Debuts and Legacies: The Crime Drop and the Role of Adolescence-Limited and Persistent Offending. *Crime Science*, 4(16). DOI: 10.1186/s40163-015-0028-3.

Felson, M. (2002). *Crime and everyday life,* 3d ed. Thousand Oaks, CA: Sage.

Felson, M. (2006). *Crime and nature.* Thousand Oaks, CA: Sage.

Felson, M. & Clarke, R.V. (1998). *Opportunity Makes the Thief: Practical Theory for Crime Prevention*. Police Research Series Paper 98. London, UK: Home Office.

Forrester, D., Frenz, S., O'Connell, M. & Pease, K. (1990). *The Kirkholt Burglary Prevention Project: Phase II*. Crime Prevention Unit Paper 23. London: Home Office.

Fujita, S. & Maxfield, M. (2012). Security and the Drop in Car Theft in the United States. In J. van Dijk, A. Tseloni & G. Farrell (Eds.) *The International Crime Drop: New Directions in Research* (pp. 231-249). Hampshire: Palgrave Macmillan. ISBN: 978-0-230-30265-5.

Garofalo, J. (1987). Reassessing the lifestyle model of criminal victimization. In M.R. Gottfredson & T. Hirschi (Eds.) *Positive Criminology*, pp. 23-42. SAGE.

Gottfredson, M.R. (1981). On the aetiology of criminal victimization. *Journal of Criminal Law and Criminology*, 72(2), 714-726.

Harrell, E. (2017). *Crime against persons with disabilities, 2009-2015 – Statistical tables*. Bureau of Justice Statistics. Office of Justice Programs. U.S. Department of Justice. NCJ 250632.

Hope, T., Bryan, J., Trickett, A. & Osborn, D.R. (2001). The phenomena of multiple victimization. The relationship between personal and property crime risk. *British Journal of Criminology*, 41(4), 595-617. DOI:10.1093/bjc/41.4.595.

Hunter, J., Ward, B., Tseloni, A. and Pease, K. (2021). Where should police forces target their residential burglary reduction efforts? Using official victimization data to predict burglary incidences at the neighbourhood level. *Crime Science.* 10(11). DOI: 10.1186/s40163-021-00144-x. Open Access.

Hindelang, M.J., Gottfredson, M.R. & Garofalo, J. (1978). Victims of Personal Crime: An Empirical Foundation for a Theory of Personal Victimization. Cambridge Mass: Ballinger Publishing Company.

Ignatans, D. & Pease, K. (2016). Taking crime seriously: Playing the weighting game. *Policing*, 10(3). 184-193. DOI: 10.1093/police/pav029.

Jackson, T., Greyson, C., Rickard, I. & Tseloni, A. (2022). Data First: Criminal Courts Data. An exploratory analysis of returning defendants and the potential of linked criminal courts data from 2011 to 2019 in England and Wales. Ministry of Justice Analytical Services Series. Ministry of Justice.

Jennings, W.G, Higgins, G.E., Tewksbury, R., Gover, A.R. & Piquero, A.R. (2010). A longitudinal assessment of the victim-offender overlap. *Journal of Interpersonal Violence*, 25(12), 2147-2174. DOI: 10.1177/0886260509354888.

Jensen, G.F. & Brownfield, D. (1986). Gender, lifestyles and victimization: Beyond routine activity theory. *Violence and Victims*, 1(2), 85-99.

Kennedy, L. W. & Forde, D. R. (1990). Routine activities and crime: an analysis of victimization in Canada. *Criminology*, 28(1), 137–152. DOI: 10.1111/j.1745-9125.1990.tb01321.x.

Kershaw, C. (2008). Plans for a New Crime Statistics System for England and Wales. *Crime Prevention and Community Safety,* 10, 150-157. DOI: 10.1057/cpcs.2008.10.

Klaus, P.A., & Kalish, C.B. (1984). *Severity of crime*. Bureau of Justice Statistics. Office of Justice Programs. U.S. Department of Justice. NCJS 92326.

Lauritsen, J.L. (2001). The social ecology of violent victimization: Individual and contextual effects in the NCVS. *Journal of Quantitative Criminology*, 17(1), 3-32. DOI: 10.1023/A:1007574114380.

Lauritsen, J. L. & Davis-Quinet, K. F. (1995). Repeat Victimization among Adolescents and Young Adults. *Journal of Quantitative Criminology*, 11(2), 143-166. DOI: 10.1007/BF02221121.

Lauritsen, J.L. & Rezey, M.L. (2013). *Measuring the prevalence of crime with the National Crime Victimization Survey*. Technical Report. Bureau of Justice Statistics. Office of Justice Programs. U.S. Department of Justice. NCJ 241656.

Lauritsen, J.L. & White, N.A. (2001). Putting violence in its place: The influence of race, ethnicity, gender, and place on the risk for violence. *Criminology & Public Policy*, 1(1), 37-60. DOI: 10.1111/j.1745-9133.2001.tb00076.x.

Lauritsen, J.L., Gatewood Owens, J., Planty, M., Rand, M.R. & Truman, J.L. (2012). *Methods for Counting High-Frequency Repeat Victimizations in the National Crime Victimization Survey*. Technical Series Report. Bureau of Justice Statistics. Office of Justice Programs. U.S. Department of Justice. NCJ 237308.

Lynch, J.P. (1987). Routine activity and victimization at work. *Journal of Quantitative Criminology*, 3(4), 283-300. DOI: 10.1007/BF01066832.

Lynch, J.P. & Addington, L.A. (2007). *Understanding crime statistics: revisiting the divergence of the NCVS and the UCR*. New York: Cambridge University Press.

Lynch, J.P., Berbaum, M.L. & Planty, M. (2002). *Investigating repeated victimization with the NCVS. Final Report.* Available at: https://popcenter.asu.edu/sites/default/files/tools/repeat_victimization/PDFs/LynchEtal_1998.pdf (accessed 13 July 2014).

Mayhew, P., Clarke, R.V.G., Sturman, A. & Hough, J.M. (1976). *Crime as Opportunity*. Home Office Research Study 34. London, UK: HMSO.

Miethe, T.D. and R.F. Meier (1994). *Crime and its Social Context: toward an integrated theory of offenders, victims and situations*. Albany, NY: State University of New York.

Mustaine, E.E. (1997). The risk of victimization in the workplace for men and women: An analysis using routine activities/lifestyle theory. *Humanity and Society*, 21(1), 17-38. DOI: 10.1177/016059769702100103.

Nelson, J. F. (1980). Multiple victimization in American cities: a statistical analysis of rare events. *American Journal of Sociology*, 85(4), 870-891. DOI: 10.1086/227092.

ONS (Office for National Statistics) (2019). *Improving Victimization Estimates Derived from the Crime in England and Wales*. London: Office for National Statistics.

ONS (Office for National Statistics) (2021). *Crime Severity Score (Experimental Statistics)*. https://www.gov.uk/government/statistics/crime-severity-score-experimental-statistics.

Osborn, D.R. & Tseloni, A. (1998). The distribution of household property crimes. *Journal of Quantitative Criminology,* 14(3), 307-330. DOI: 10.1023/A:1023086530548.

Osborn, D. R., Trickett, A. & Elder, R. (1992). Area characteristics and regional variates as determinants of area property crime levels. *Journal of Quantitative Criminology*, 8(3), 265–285. DOI: 10.1007/BF01064549.

Osborn, D.R., Ellingworth, D., Hope, T. & Trickett, A. (1996). Are Repeatedly Victimised Households Different? *Journal of Quantitative Criminology*, 12(2), 223-245. DOI: 10.1007/BF02354416.

Osgood, W. (2000). Poisson-based regression analysis of aggregate crime rates. *Journal of Quantitative Criminology*, 16(1), 21-43. DOI: 10.1023/A:1007521427059.

Oudekerk, B.A. & Truman, J.L. (2017). *Repeat violent victimization, 2005-14*. Special Report. Bureau of Justice Statistics. Office of Justice Programs. U.S. Department of Justice. NCJ 250567.

Pease, K. (1998). *Repeat Victimization: Taking Stock*. London: Home Office.

Planty, M. & Langton, L. (2025). Who does it hurt the most?: Exploring different approaches to measuring the harms and consequences of victimization. *Journal of Contemporary Criminal Justice*. Special issue: M. Xie, J.P. Lynch & J. Lauritsen (Eds.) "The National Crime Victimization Survey at Fifty".

Planty, M. & Strom, K.J. (2007). Understanding the role of repeat victims in the production of annual US victimization rates. *Journal of Quantitative Criminology,* 23, 179-200. DOI: 10.1007/s10940-007-9026-2.

Rand, M., Lynch, J.P. & Cantor, D. (1997). *Criminal victimization, 1973-95*. Bureau of Justice Statistics, National Crime Victimization Survey. U.S. Department of Justice, Office of Justice Programmes. April 1997, NCJ-163069. Available at ttps://bjs.ojp.gov/content/pub/pdf/Cv73_95.pdf (accessed 4 July 2024).

Reiss, A.J. (1980). Victim proneness in repeat victimization by type of crime. In S. Fienberg & A.J. Reiss (Eds.), *Indicators of Crime and Criminal Justice Quantitative Studies* (pp. 41–53). Washington, DC: Department of Justice.

Rosenfeld R. (2007). Explaining the divergence between UCR and NCVS aggravated assault trends. In J.P. Lynch & L.A. Addington (Eds). *Understanding crime statistics: revisiting the divergence of the NCVS and the UCR*. New York: Cambridge University Press.

Sidebottom, A. & Wortley, R. (2016). Environmental Criminology. In A. Piquero (Ed.) *Handbook of Criminological Theory* (pp. 156). Chichester: John Wiley and Sons.

Sherman, L., Neyroud, P. W., & Neyroud, E. (2016). The Cambridge Crime Harm Index: Measuring total harm from crime based on sentencing guidelines. *Policing*, <u>10(3)</u>, 171–183. DOI: 10.1093/police/paw003.

Sparks, R. (1981). Multiple Victimization: Evidence, Theory and Future Research. *Journal of Criminal Law and Criminology*, 72(2), 762–778.

Sparks, R. (1982). *Research on victims of crime: Accomplishments, issues, and new directions*. Crime and Delinquency Issues, US Department of Health and Human Services, National Institute of Mental Health, Center for Studies of Crime and Delinquency, Rockville, Maryland.

Trickett, A., Osborn, D. & Seymour, J. (1992). What is different about high crime areas? *British Journal of Criminology*, 32(1), 81–89. DOI: 10.1093/oxfordjournals.bjc.a048181.

Tseloni, A. (1995). The modelling of threat incidence: Evidence from the British Crime Survey. In R.E. Dobash, R.P. Dobash, & L. Noaks (Eds.), *Gender and Crime* (pp. 269-294). Cardiff: University of Wales Press.

Tseloni, A. (1999). Comparing multilevel and single-level negative binomial models of personal crimes: Evidence from the National Crime Victimization Survey. In N. Schenker (Ed.), *1999 Proceedings, Section on Survey Research Methods, American Statistical Association*, (pp. 19-27).

Tseloni, A. (2006). Multilevel modelling of the number of property crimes: Household and area effects. *Journal of the Royal Statistical Society Series A-Statistics in Society*, 169(2), 205-233. DOI: 10.1111/j.1467-985X.2005.00388.x.

Tseloni, A. (2014). Understanding Victimization Frequency. Chapter 127. In G. Bruinsma & D. Weisburd (Eds. in Chief) *Encyclopaedia of Criminology and Criminal Justice (ECCJ)* (pp. 5370-5382). New York: Springer-Verlag.

Tseloni, A. & Pease, K. (2003). Repeat victimization: 'Boosts' or 'Flags'? *British Journal of Criminology*, 43(1), 196-212. DOI: 10.1093/bjc/43.1.196.

Tseloni, A. & Pease, K. (2004). Repeat personal victimization: Random effects, event dependence and unexplained heterogeneity. *British Journal of Criminology*, 44(6), 931-945. DOI: 10.1093/bjc/azh047.

Tseloni, A. & Pease, K. (2005). Population Inequality: The Case of Repeat Victimization. *International Review of Victimology*, 12(1), 75-90. DOI: 10.1177/026975800501200105.

Pease, K. & Tseloni, A. (2014). *Using modelling to predict and prevent victimization.* Springer-Brief Criminology Series, New York: Springer.

Tseloni, A., Osborn, D.R., Trickett, A. & Pease, K. (2002). Modelling property crime using the British Crime Survey: What have we learned? *British Journal of Criminology,* 42(1), 89-108. DOI: 10.1093/bjc/42.1.109.

Tseloni, A., Wittebrood, K., Farrell, G. & Pease K. (2004). Burglary victimization in the U.S., England and Wales, and the Netherlands: Cross-national comparison of routine activity patterns. *British Journal of Criminology*, 44(1), 66-91. DOI: 10.1093/bjc/44.1.66.

Tseloni, A., Mailley, J., Farrell, G. & Tilley, N. (2010a). Exploring the international decline in crime rates. *European Journal of Criminology*, 7(5), 375-394. DOI: 10.1177/1477370810367014.

Tseloni, A., Ntzoufras, I., Nicolaou, A. & Pease, K (2010b). Concentration of personal and household crimes in England and Wales. *European Journal of Applied Mathematics, Special Issue on Mathematical Models for Criminality*, 21(4-5), 325-348. DOI: 10.1017/S0956792510000057.

Tseloni, A., Tilley, N. & Farrell, G. (2018). Victimization surveys in environmental criminology. In G. Bruinsma & S. Johnson (Eds.), *The Oxford Handbook of Environmental Criminology* (pp. 277-296). Oxford University Press. DOI: 10.1093/oxfordhb/9780190279707.013.23.

Wang P., Cockburn I. M., & Puterman M. L. (1998). Analysis of patent data: A mixed Poisson regression model approach. *Journal of Business and Economic Statistics*, 16(1), 27-36. DOI: 10.1080/07350015.1998.10524732.

Warner, S.B. (1931). Crimes known to the police: An index of crime? *Harvard Law Review*, 45, 307–334.

Weisel, D.L. (2005). *Analyzing repeat victimization*. Problem-Oriented Guides for Police Problem-Solving Tools Series No. 4. Office for Community Oriented Policing Services, US Department of Justice. Available at: https://popcenter.asu.edu/sites/default/files/analyzing_repeat_victimization.pdf (accessed 13 July 2024).

Worrall, A., & Pease, K. (1986). Personal crime against women: Evidence from the 1982 British Crime Survey. *The Howard Journal*, 25(2), 118-124. DOI: 10.1111/j.1468-2311.1986.tb00550.x.

Wortley, R. & Mazzerole, L. (Eds.) (2008). *Environmental criminology and crime analysis*. Cullompton, UK: Willan.

Xekalaki, E. (1983). The univariate generalized Waring distribution in relation to accident theory: proneness, spells or contagion? *Biometrics*, 39(4), 887-895. DOI: 10.2307/2531324.

Xie, M., Heimer, K. & Lauritsen, J.L. (2012). Violence against women in U.S. metropolitan areas: changes in women's status and risk, 1980–2004. *Criminology*, 50(1), 105-143. DOI: 10.1111/j.1745-9125.2011.00245.x.

Xie, M., Ortiz Solis, V. & Chaunan, P. (2024). Declining trends in crime Reporting and victims' trust of police in the United States and major metropolitan areas in the 21st century.

Journal of Contemporary Criminal Justice, 40(1), 138-171. DOI: 10.1177/10439862231190212.

Ybarra, L.M.R. & Lohr, S.L. (2002). Estimates of repeat victimization using the National Crime Victimization Survey. *Journal of Quantitative Criminology*, 18(1): 1-21. DOI: 10.1023/A:1013244611986.

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