What we talk about when we talk about vulnerability and youth crime:

A narrative review

Laura Bui¹ and Jo Deakin¹

¹Department of Criminology, University of Manchester

Author Note

Laura Bui <https://orcid.org/0000-0003-4372-3359>

Jo Deakin <https://orcid.org/0000-0003-0650-2354>

Correspondence concerning this article should be addressed to Laura Bui, Department of Criminology, School of Social Sciences, University of Manchester, Oxford Road, Manchester, M13 9PL, UK. Contact: laura.bui@manchester.ac.uk

Abstract

Describing young people who offend or who are more likely to offend as vulnerable or having vulnerability seems commonplace in the literature as of late. Although the use of vulnerability in the research literature on youth crime appears widespread, its meaning, nonetheless, is unclear: if not assumed or implicit, it fluctuates across studies. Because of this ambiguity, we systematically review the empirical literature on youth crime between 1990 to 2020 to gauge how vulnerability is understood now and over time. A total of 19 studies out of 631 original records met the inclusion criteria. The included studies neatly fit into pre-existing classifications of vulnerability from the research literature. The vast majority of the included studies appeared in the decade 2010 to 2019, and meanings of vulnerability as social disadvantage and risk first appeared during this time. Overall and underlying meanings of vulnerability as well as their research and real-world implications are discussed.

Key words: vulnerability, youth crime, juvenile offenders, risk, narrative review

What we talk about when we talk about vulnerability and youth crime:

A narrative review

1. Introduction

Describing young people who offend or who are more likely to offend as vulnerable or having vulnerability seems commonplace in the literature as of late (Lloyd, 1998; Loeber, 1990; Singh et al., 2014; Tarolla et al., 2002). It could be that the use of the term reflects contemporary times: global trends show an overall decline in youth crime in recent years but those who offend have a markedly higher level of mental health issues, especially gang members, compared with those who do not offend (Young et al., 2017). For example, although first-time entrants decreased¹ in England and Wales during April 2018 to March 2019, compared to the year before, self-harm incidents while in custody increased 3% to 1,800, and is considered the highest number of incidents in the last five years (Youth Justice Board, 2019). In particular, young people engaging in serious offending are more likely to have adverse backgrounds of abuse, poor mental health, violence, and deprivation compared to those on the side of low to no offending (Borschmann et al., 2020; Fazel et al., 2008; Malvaso et al., 2016). Seriousness indicates severity and persistence, and many characteristics related to offending are more apparent among a minority who engage in a disproportionate amount of the total youth crime committed (Baglivio et al., 2014; Schubert et al., 2011; Skeem et al., 2014). Although the use of vulnerability in the research literature related to youth crime is widespread, its meaning, nonetheless, is unclear: if not assumed or implicit, it fluctuates across studies.

1.1 The ambiguity and frequent use of vulnerability: an old story

The pervasive use of the term vulnerability is likewise found across disciplines as diverse as medicine (e.g., Bracken-Roche et al., 2016; Lajoie et al., 2020), public health (e.g.,

¹ 11,900 first time entrants, which is an 85% decrease from year ending March 2009 and 18% decrease from year ending March 2018.

Diderichsen et al., 2019; Nicodemo et al., 2020), environmental studies (e.g., Lieberman-Cribbin et al., 2020; Peng et al., 2019), sociology (e.g., Clark, 2020; Mitchell, 2020), and philosophy (Boldt, 2019; Weissman, 2019), even appearing in political and social discourses (Brown, 2017). The observation of the term's frequent use and ambiguity is not new: even twenty years ago in HIV and AIDS research, Delor and Hubert (2000) stated that they were “revisiting” the concept, observing its increasing use across the social sciences and medicine. Even then, they wanted to clarify the meaning of vulnerability in hopes that it could be used in their area of research as a relevant and meaningful concept. They reviewed work in different disciplines that used the term, and from criminology, specifically in victimization research, noted that vulnerability was seen not as an essential and stable individual characteristic but as variation, in that individuals and groups had different risks in social context and relationships that interacted with each other at certain time points to produce the victimization.

Recently, a similar desire to make the concept meaningful is found in social work: again, noting the numerous uses of the term across diverse research areas, Virokannas et al. (2020) conducted a narrative review of social service and sociological abstracts and summarized the literature from 86 studies in English between 2000 to 2016, which were primarily from the US (n= 30) and UK (n=23). They concluded that vulnerability should be conceptualized as a way of understanding the relationships between individuals and institutions, including gender practices and the “temporal, situational, relational, and structural” forms the term can take – a similar conclusion of complexity from previous authors. Reviews of the term seem to want to capture a solid, fixed meaning to advance knowledge in their respective research areas, and a number of scholars have observed that there are two primary conceptualizations of vulnerability across the research literature, initially emerging from healthcare research (Kottow, 2005): particular and universal.

1.1.1 Particular and universal vulnerabilities

Particular (deficient) vulnerability is considered an undesirable quality that is used to identify certain groups of people at risk of suffering harm or behaving unacceptably (Herring, 2020). It also can be seen as normative, in that it comprises characteristics perceived to make certain people vulnerable and these can be behaviors, experiences, and environments to which people should not be exposed (Bartkowiak-Théron et al., 2017; Brown et al., 2017). Particular vulnerability can be further divided into four categories according to Brown (2017): (1) situational, in that specific circumstances or experiences that can be social or political, highlight the perception that certain individuals and groups are deserving of protection or concern; (2) innate, which pertains to individual factors connected to certain phases of development or the life course; (3) social disadvantage, whereby exposure to adverse environments, whether that be natural, social, or economic, leads to an inability to cope with the consequences; and (4) risk, which seems to be used interchangeably with the concept of vulnerability, and relates to management and control of behaviors and threats that have the potential of bringing about negative life outcomes. Criticisms of particular vulnerability include labelling effects whereby whole groups of people can be excluded and stigmatized, and an inability to consider that individuals with such a label do not view themselves as such. Although these criticisms focus on possible harms that the label may produce, they do not seem to acknowledge the reality that people can be considered and can actually be vulnerable (Neal, 2020).

Universal (beneficial) vulnerability, a relatively new manifestation, refers to the actuality that everyone is vulnerable, and that is because everyone depends on others for their psychological and physical well-being – a human attribute that should be welcomed (Herring, 2016a, 2020). In the current social context, at least in Western, industrialized countries, independence and freedom are viewed as key rights in the legal system, and those who are unable to fulfill or engage in these rights are viewed as “vulnerable” and in need of monitoring, supervision, and discipline (Herring, 2016b). If social institutions were transformed to view all

individuals as vulnerable, then there would be no groups seen as incapable of caring for their own needs and no divisions between “us” and “them” (Fineman, 2013, 2017). In an overview of the social sciences literature, Brown et al. (2017), too, observed that universal vulnerability manifested as something everyone experienced but at varying degrees depending on the stage of the life course and their position in the social and political spheres. Criticisms, however, abound: it is thought that viewing vulnerability as universal erases the fact that some groups and individuals are actually more susceptible to undesirable outcomes than others, and denies the reality of specific vulnerabilities faced (Herring, 2016b); but it seems that a number of scholars in vulnerability research see the universal as complementary of the particular, whereby the particular is seen as additional or a heightening of vulnerability (Fineman, 2011; Neal, 2020). Table 1 outlines the different types of vulnerability as conceptualized by the research literature.

As vulnerability (and members of its word family) is conceptually vague when applied to crime and young people, its potential as an insightful concept is inevitably obscure. Should “vulnerability” be limited to a general descriptor to evoke the zeitgeist? Perhaps, as a term, it should be viewed with skepticism because of underlying motives of those who use it? Or is there enough in the literature to demonstrate a specific and consistent concept, yet to be fully articulated, that can illuminate our understanding of youth crime? Because of this ambiguity, we systematically review the empirical literature on youth crime between 1990 to 2020 to gauge how vulnerability is understood now and over time. Investigating the underlying denotation of concepts and their use are necessary for advancing knowledge because language and its meanings in research can be applied and reflected in practice and policy, and in turn can manifest in the attitudes and actions of those who implement those practices and policies. Young et al. (2017), for example, noted that the pervasive use of “juvenile delinquent” in the academic literature may be problematic because it could be viewed as derogatory, accompanied

	Definition	Example	Policy implications
1. Universal vulnerability	Essential, biological and permanent; fragility and susceptibility to adverse outcomes that everyone experiences because humanity is characterised as dependent and interconnected	Anti-Social Behaviour Orders are abolished as social control is unnecessary	Policy and its products will be more inclusive and considerate of everyone's needs instead of just a minority whenever an issue or crisis arises
2. Particular vulnerability	A group or category of people who are more fragile or susceptible to an adverse outcome than others		(See below for specifics)
1a. Situational	Being in a particular circumstance or transgression that increases the likelihood of an adverse outcome, especially being harmed by others	Ethnic and minority groups; sex workers; asylum seekers and refugees	Certain individuals are considered victims and/or deserving of extra protection and provisions, even extra management as they could be concurrently seen as a problem
1b. Innate	Having a developmental or biological characteristic that makes one unable to protect oneself or susceptible to an adverse outcome	Childhood and youth development; disability	Such individuals are perceived as needing extra support to ensure good health and safety, and so rights as well as disempowering measures can be advanced
1c. Social disadvantage	Experiencing an adverse outcome resulting from exposure to either natural/ environmental hazards or poorly resourced and serviced areas/circumstances	Climate change and its impact on certain neighbourhoods; resilience or inability to cope whenever a crisis occurs	Access and control of social structures affect the socioeconomic realities of certain individuals and these can be designed in such a way as to prevent such disadvantages
1d. Risk	Having an individual or social characteristic that is in need of targeting and managing in order to lower the likelihood of an adverse outcome, but with more ethical and moral connotations than traditional meanings of risk	Therapeutic interventions; early years education and nutrition programmes	Develop effective interventions and prevention targeting certain individual and social characteristics
*Based on Herring (2016) and Brown (2017)			
Table 1. Types of vulnerability			

by undesirable and false assumptions.

1.2 Research questions

We address the following two key questions by systematically reviewing the literature on vulnerability and youth crime:

- (1) How is vulnerability perceived and conceptualized in the research literature on youth crime?
- (2) Has the meaning and role of vulnerability changed over time in said literature, and if so, how?

2. Methodology

2.1 The (systematic) narrative review

The appropriate type of review to answer the kind of questions we have with the kind of studies we will be evaluating is the narrative review. The value of such a review lies in its purpose of evaluating or creating a new theory or conceptualization by integrating together studies that have disparate topics or methodologies (Baumeister & Leary, 1997). Narrative reviews, unfortunately, are often seen as inferior to systematic reviews, which uses a structured method to locate, appraise, and synthesize evidence from previous studies to answer a clearly formulated and narrow question; in the past, narrative reviews explicitly suffered from ambiguity on how, why, and where studies were selected, which increased the possibility of serious biases (Farrington & Jolliffe, 2017). These limitations are problematic, but narrative reviews can be complementary and systematic, depending on their purpose, method, and context (Greenhalgh et al., 2018). As such, they are sometimes classed as a type of systematic review for qualitative information (Siddaway et al., 2019). Because the present review appraises studies with diverse methodologies and topics in youth crime and attempts to answer

key questions that require a more interpretative and discursive synthesis of existing literature, the narrative review was considered the best approach.

2.2 *Inclusion criteria*

Criteria for including a study in the current review are as follows: (a) studies must be empirical and can be of quantitative, qualitative, or mixed method methodology; (b) must investigate possible factors or reasons for offending, and so, if quantitative, the outcome measure must be a proxy of offending (e.g., conviction, arrest, self-report); (c) will need to either measure or define vulnerability, or refer to their sample as being or possessing such from the introduction; (d) the ages of the sample will be under the age of 18 years. For studies that have an age range whose maximum is 18 and older, this can be included if the minimum is below 18 years. For example, ages 15 to 29 years. For longitudinal studies, however, outcomes will need to be assessed for ages 17 and under; and (e) must have been published or have appeared between 1 January 1990 to 30 June 2020 and written in the English language. What is meant by “appeared” applies to unpublished studies that would be found in what is known as gray literature, which is uncontrolled by commercial publishers and includes reports and working papers from scientific research groups, graduate dissertations, and conference proceedings (Siddaway et al., 2019). We limit our study selection to a thirty-year time range because the term vulnerability first appeared in research, in the area of natural disasters, in the late 80s and its increased use occurred subsequently after, appearing across other research areas (Wisner, 1993, 2016).

2.3 *Search strategy*

Using the boolean search strategy (Brunton et al., 2017), search terms used to identify potential studies were (vulnerab*) AND (adolescen* OR youth* OR juvenile* OR minor* OR child* OR young) AND (delinquen* OR offend* OR crim* OR violen* OR arrest* OR recidivis* OR reoffen* OR rearrest* OR convict* OR conflict * law OR justice).

Literature searches were conducted in PsychINFO and 17 databases in the ProQuest Social Science Premium Collection².

2.4 *Selection and review process*

The selection process is informed by the Preferred Reporting of Items for Systematic Reviews and Meta Analyses (PRISMA) (Moher et al., 2009), and is detailed in Figure 1. The first author (LB) identified records from the literature searches in each of the 18 databases, removing any duplicates, then screened the title and abstracts, and then searched the full texts for eligibility. Demographic and relevant information of eligible studies were documented in a shared spreadsheet. The second author (JD) independently reviewed the screened titles and abstracts and repeated the subsequent steps of the selection and review process. Disagreements on what studies should be included or excluded were discussed and resolved during meetings.

As the term vulnerability (and the like) and how it was used was of interest, this provided additional challenges in selection, so additional criteria were set during the scanning of abstracts. For example, if the term vulnerability was only mentioned in the last sentence of the abstract, it was excluded; if it was used merely as a substitute for “at-risk” (e.g., vulnerable to / for), the abstract was, too, excluded. During full-text selection, outcome measures of violence and delinquency that included illegal activities or were stated in a way that did not preclude offences were kept. An example was a violence outcome measure that captured how many times the participant beat or kicked someone in the last 12 months (Norström et al., 2018).

A total of 19 studies met the inclusion criteria. Two of the studies were doctoral dissertations while the remaining 17 were journal article publications. The initial search yielded

² Comprises the six Collections in Criminology (Criminal Justice Database and National Criminal Justice Reference Service [NCJRS]); Education (Education Database and ERIC); Library and Information Science (Library & Information Science Abstracts [LISA] and Library Science Database); Linguistics (Linguistics and Language Behavior Abstracts [LLBA] and Linguistics Database); Politics (PAIS Index, Policy File Index, Worldwide Political Science Abstracts, and Political Science Database); and Sociology (Applied Social Sciences Index and Abstracts [ASSIA], Sociological Abstracts, and Sociology Database); in addition to the Social Science Database and the International Bibliography of the Social Sciences.

Figure 1. Flow diagram of the different phases of review (adapted from Moher et al. 2009)

631 original records, and from title and abstract screening, 48 records were identified for a full text search. The full texts of two (of the 48) could not be obtained, so authors of those papers were contacted; one record was from a conference proceeding whose subsequent full text was substantially changed so it did not meet the review criteria, while the other was inevitably excluded because it was not sent by the author. The study protocol and selection details are available upon request.

3. Results

3.1 Demographics of the included studies

Table 2 gives a summary of each of the 19 studies. Samples were from several populations: community, student, justice and social system involved. The age range of the overall samples were 10 to 21 years, with sample sizes ranging from five to 9,853. Nine of the studies were based on populations in the US, three in England and Wales, two each in Scotland and Belgium, and one each in Singapore, Canada, and Norway. Six of these studies used the same data: two US studies used the National Longitudinal Study of Adolescent Health (i.e., Newsome, 2013; Newsome & Sullivan, 2014); the two Scottish studies used the Edinburgh Study of Youth Transitions and Crime (i.e., McAra & McVie, 2010, 2016); and the two Belgian studies used the second International Self-Reported Delinquency Study (ISRD-2; i.e., Pauwels et al., 2011; Vettenburg et al., 2013). Of these studies, three were qualitative because they used interviews and their findings comprised interpreting those interviews and identifying themes.

3.2 How is vulnerability perceived and conceptualized in the research literature on youth crime?

Again referring to Table 2, types of vulnerability that each study uses are summarized. None seem to use the term to mean universal vulnerability. This is unsurprising because young people who offend or who are at-risk of doing so are perceived as a group that is more prone

Table 2. Overview of the 19 included studies

		Study Characteristics					Aims / purpose	Primary meaning of vulnerability
		Method & analysis	Country	Sample	N	Age range		
1	Day (2017)	Qualitative	England & Wales	Children in care affiliated with a number of Northwest English Youth Offending Teams	19	13-17	Understand why children in care, a vulnerable group, offend and become justice-involved	Particular-situational
2	Ezechukwu (2014) ¹	Qualitative	USA	Male offenders from one community correctional facility in Ohio	5	15-18	Describe how this developmentally vulnerable group interprets its world and respond to challenges	Particular-innate

							that may impact life	
							outcomes	
3	Fine (2017)	Quantitative	USA	Male offenders followed after their first official arrest from the cities Philadelphia, PA; Jefferson Parish, LA; and Orange County, CA	1216	13-17**	Examine the interaction between impulse control, a developmental vulnerability, and environment on offending	Particular- innate
4	Hayden (2008)	Mixed (only quantitative case study qualified)	England & Wales	Offenders in the community participating in an intervention in one	29	10-17	Two case studies where the first one examines educational support and its relationship to later	Particular- situational

				urban Youth			offending among vulnerable	
				Offending Team			youth	
5	Kingery et al. (1997)	Quantitative	USA	Ninth-grade students from public schools in Lexington, KY	2066	14-15	Examine to what extent does vulnerability, attitudes towards school, drug involvement, and delinquency explain violent behavior and offences	Particular- situational
6	Lim et al. (2013)	Qualitative	Singapore	Male offenders and at-risk youth from four agencies: two counselling centers and one low and one high security	36	13-18	Explore how vulnerable young people use participatory media in their peer socializing that may increase likelihood of later delinquency/offending	Particular- situational

				residential				
				rehabilitation home				
7	Logan-Greene et al. (2011)	Quantitative	USA	Students from high schools in the northwest and southwest regions	848	14-18	Examine risk and protective factors for violent behavior and how they differ between sex among emotionally vulnerable youth	Particular- risk
8	McAra & McVie (2016)	Quantitative	Scotland	Community cohort that started secondary school in the City of Edinburgh in 1998	4300	13	Explore the effects of gender and poverty in the presence of risk and protective factors in predicting violent offending among young offenders who should be conceptualized as vulnerable	Particular- social disadvantage

9	McAra & McVie (2010)	Quantitative	Scotland	Community cohort that started secondary school in the City of Edinburgh in 1998	4300	15-22	Understand factors and processes leading to criminal offending and desistance among vulnerable youth	Particular- social disadvantage
10	Mowder et al. (2010)	Quantitative	USA	Offenders in a maximum-security juvenile correctional facility in a midwestern state	215	12-18	Examine profiles of resilience and vulnerability among juvenile offenders using the Resiliency Scales for Children and Adolescents (RSCA) and relating it to offending	Particular- risk
11	Newsome (2013) ¹	Quantitative	USA	Students from seventh to twelfth grades from 80 high	1568	11-19	Assess extent to which genetic and environmental factors contribute to differences in resilience and	Particular- innate

				and middle schools			vulnerability to risks for	
				across the country			delinquency, including	
							offending	
12	Newsome & Sullivan (2014)	Quantitative	USA	Students from seventh to twelfth grades from 80 high and middle schools across the country	1568	11-19	Same as Newsome (2013)	Particular- innate
13	Norström et al. (2018)	Quantitative	Norway	Students from 82 junior and senior high schools across the country in Autumn 2006	9853	15-17	Examines whether the effect of socioeconomic status on violence is dependent on the differential exposure or vulnerability to drinking behavior	Particular- risk

14	Pauwels et al. (2011)	Quantitative	Belgium	Students in the first three years of secondary school from four cities in Wallonia and Flanders	2103	11-17	Understand the prevalence of young people involved in street gangs (crime is a prerequisite) and its association to societal vulnerability	Particular- social disadvantage
15	Vettenburg et al. (2013)	Quantitative	Belgium	Students in the first three years of secondary school from four cities in Wallonia and Flanders	2103	11-17	Examine the relationship between societal vulnerability and self- reported offending, as well as other mediating mechanisms	Particular- social disadvantage
16	Viljoen et al. (2012)	Quantitative	Canada	Offenders from ten probation offices throughout the region between ages	90	13-18*	Conduct an initial validation of the Short-Term Assessment of Risk and Treatability: Adolescent	Particular- risk

				12 to 18 at time of initial baseline interview and adjudication by the courts			Version (START:AV) and assess how well the tool predicts adverse outcomes like offending using strength and vulnerability total scores	
17	Wiesner & Windle (2004)	Quantitative	USA	Students from three homogeneous, non- denominational, suburban high schools in western New York	1218	15-17	Identify distinct delinquency/ offending trajectories and their relationship to individual and contextual vulnerability factors	Particular- innate
18	Wikström et al. (2018)	Quantitative	England & Wales	Randomly selected young people who turned 12 in 2003	716	13-17	Explore how personal factors make someone differentially vulnerable to	Particular- risk

				from the city of			the characteristics of places	
				Peterborough			in explaining levels of crime	
19	Zavala (2018)	Quantitative	USA	Male students from	689	15-21	Assess the applicability of	Particular-
				53 high schools of			target congruence theory,	situational
				the 132 that were			including target	
				randomly selected			vulnerability, to the victim-	
				across the country			offender overlap, whose	
							study outcomes are	
							victimization and criminal	
							behavior	

*unable to confirm ages during three-month follow-up; could be ages 14-19 at most

¹ grey literature

** unable to confirm ages during six-month follow-up; could be ages 14-18 at most

to adverse outcomes than the general population. We also observed that these studies fit neatly into pre-existing classifications of vulnerability from the research literature. These studies additionally differed in what type of particular vulnerability they mean. They are categorized below:

3.2.1 Situational

Five of the 19 studies understood vulnerability as a circumstance, whether that be a social position, situation, or transgression, that increases the likelihood of offending. With this particular vulnerability, increased likelihood can also include being harmed by others, which acknowledges that those with this type of vulnerability are perceived sometimes as both problem and in need of protection. Zavala (2018) examined the concept of target vulnerability, defined as characteristics that rendered someone subject to victimization, and its relationship to offending. Target vulnerability comprised fear of violence (a proxy for mental vulnerability), being on welfare, and staying out late at night. In addition, children in care were understood to be a vulnerable group in Day (2017) because they needed consistent support and residential care was considered an environment conducive to crime; the 19 young people interviewed for the study were also under youth justice supervision. Similarly, Lim et al. (2013) described young offenders and youths-at-risk as vulnerable because they were more likely than others, given their situations, to be pulled into offending through peer interactions on their mobile phones and the internet.

Hayden (2008) used a mixed-methods approach to examine education and secondary school-aged offending in two case studies, but only the quantitative study met the inclusion criteria. Offending increased with the most vulnerable groups of children: those in care and those excluded from mainstream education. Vulnerable children often fell into both groups so would have significant educational needs. Interestingly, the study ended by describing these children as “very problematic but vulnerable.” In a large sample of ninth-graders, Kingery et

al. (1997) defined vulnerability as lacking coping resources (such as having an absent father or a mother with poor educational attainment) or being a victim at school where one had been hit or attacked, touched inappropriately, or been exposed to weapons. They concluded that vulnerability was a possible main contributor for later violent offending and suggested that greater school security and counselling services should be provided for students with the most vulnerability to boost coping skills and academic success.

3.2.2 *Innate*

Five of the studies understood vulnerability as a developmental and/ or biological characteristic that rendered a young person susceptible to offending. These studies view vulnerability in the context of development, suggesting that adolescence is an important time where many factors sway the physical, social, and mental growth of young people. Fine and colleagues (2017) viewed poor impulse control as a vulnerability – a dispositional, developmental characteristic that increased the likelihood for adolescent offending. In addition, certain social environments such as the home, school, and neighborhood may become contextual vulnerabilities that make adolescents susceptible to offending regardless of the level of impulse control, although results showed that positive environments made little desirable impact on those with low impulse control.

Young offenders are perceived as developmentally vulnerable, according to Ezechukwu (2014), because they possessed or were exposed to a number of adverse factors that have hindered their development towards positive life outcomes. The dissertation focused on how many aspects of a young person's life interacted together to shape personal experiences and the interpretation of those experiences to affect self-image and offending behavior. Both Newsome (2013) and Newsome and Sullivan (2014) elaborated on the developmental literature that focuses on resilience and vulnerability. Resilient adolescents confronted risk factors for offending but did not succumb to them whereas vulnerable adolescents confronted little to no

risk factors yet engaged in offending. Their research, whereby the latter was based on the former, the first author's dissertation, showed that vulnerable youths possessed genetic characteristics that made them susceptible compared to the overall population. Last, Wiesner and Windle (2004) used the Middle Adolescent Vulnerability Study to examine a number of characteristics referred to as vulnerability factors such as stressful life events and perceived familial support to develop distinct developmental trajectories of juvenile offending. Distinct differences in vulnerability factors were found between rare/ moderate late and high chronic offending groups.

3.2.3 Social disadvantage

Four studies were classified as understanding vulnerability as social disadvantage and were based on two datasets and similar theoretical approaches. Both pairs of these studies viewed vulnerability as significant exposure to areas and institutions that generated unfavorable experiences, whether that be because lived communities were poorly resourced or interactions with social institutions were negative. McAra and McVie (2010, 2016) emphasized that the young people who offended in their studies should be perceived as vulnerable children and not as criminals. The reason being that young people who were violent had a number of distinct characteristics referred to as vulnerabilities such as poor mental health, self-harming, harassment by adults, and victimization compared to those that were not violent (McAra & McVie, 2010). Vulnerabilities were seen as beyond the control of the young person while violence was considered a way to cope with impoverishment and these adversities. Using the Belgian data from the ISRD-2, Pauwels et al. (2011) and Vettenburg et al. (2013) both examined the theory of societal vulnerability on group offending ("troublesome youth groups"). The theory posited that negative and repetitive interactions between social institutions and the individual led to coping strategies that increased the likelihood of persistent offending. Those who were societally vulnerable were ones who belonged to marginalized

social groups or statuses that made negative contacts with social institutions likely, and these institutions would not meet their needs. In these studies, an example of a societally vulnerable group was low socioeconomic status individuals.

3.2.4 *Risk*

Particular vulnerability was specifically perceived as risk in five of the 19 included studies. In the literature, it is often the case that vulnerability is used interchangeably with risk, but as Brown (2017) had noted, there are differences between the terms, albeit subtle: to use vulnerability instead of risk meant an emphasis on the ethical and moral while identifying characteristics that could be targeted and managed to reduce the likelihood of offending. In some instances, it seemed to be a term merely used to avoid using “risk”. Some studies avoided “risk” because it did not seem to fully capture the complexity of interactions between characteristics. Norström et al. (2018) and Wikström et al. (2018) both used the term “differential vulnerability” to stress that individuals varied in their susceptibility to offending depending on the interaction between levels of certain characteristics, which in these studies were socioeconomic status and alcohol use; and criminogenic setting and crime propensity, respectively. Logan-Greene and colleagues (2011) situated their study in a risk and protective factor framework and considered young people in the community with emotional issues and likely to drop out of school to be vulnerable – at-risk for violent offending.

Reducing recidivism by identifying certain characteristics through the use of clinical guides were the focus of Mowder et al. (2010) and Viljoen et al. (2012). The former used the Resiliency Scales for Children and Adolescents to develop profiles of young offenders on characteristics that encouraged prosocial outcomes and those considered to be vulnerabilities that put them at risk for negative outcomes. The latter validated the Short-Term Assessment of Risk and Treatability: Adolescent Version, a risk assessment tool. Vulnerability was used, but it was explicit that it was used to mean risk factors.

Figure 2. Number of included studies in each decade by particular vulnerability type

3.3 *Has the meaning and role of vulnerability changed over time in said literature, and if so, how?*

The earliest included study emerged in 1997 (i.e., Kingery et al.) and the latest emerged in 2018 (i.e., Norström et al.; Wikström et al.; and Zavala). Figure 2 shows the number of studies for each type of particular vulnerability, according to decade, from the nineties to the twenty-tens. The number of studies using the term vulnerability in the youth crime literature increased with each passing decade. The nineties contained 5.3% of the included studies ($n = 1$), and then the noughties doubled that to contain 10.5% of said studies ($n = 2$). But 84.2% of the included studies appeared in the 2010s ($n = 16$).

Across the 30 years, vulnerability has been understood as primarily situational, with at least one study for each decade, but tripling from one to three studies in the 2010s. The noughties saw a new meaning of vulnerability manifest: innate; it went from one to four studies in the

2010s. It was also in the most recent decade that both social disadvantage and risk meanings first appeared in studies on youth crime and they made up 56.3% of the included studies for the 2010s.

4. Discussion

4.1. The meaning of vulnerability

The present study reviewed the literature on youth crime to identify and understand how the term vulnerability was used. The reasons for doing so were several: one, the pervasive use of vulnerability has appeared across social sciences; two, its meaning is unclear because, often, it is assumed yet there is a lot of variation across studies; and three, the possibility of a concise, meaningful understanding of the term could advance research directions and real-world applications related to young people and offending. Conducting this research originated from observing the frequent use of vulnerability in the literature and understanding the real-world consequences of language.

To date, this is the only study to directly address the use of vulnerability in the youth crime literature, and it does so by systematically reviewing the literature so to overcome typical limitations of reviews, be transparent, and enable future replication. The findings addressed two key questions – how is vulnerability perceived and conceptualized in the literature? And has its meaning changed over time, and if so, how?

The use of the term vulnerability could be organized into the existing categories of universal and particular as previously described by Herring (2016b) and Brown (2017). All included studies used the term to mean particular vulnerability but varied on the specific type. The lack of universal vulnerability in the youth crime literature, however, reflects the view that certain groups, not least justice-involved young people, need extra care and attention to prevent further offending but the reasons differ for why that is: some belong to a particular social

position or status; others are in *that* developmental phase; some have adverse experiences from their lived areas or social institutions; or they are associated with undesirable characteristics that need to be targeted with initiatives.

Considering time, the use of vulnerability seemed to increase over the decades since 1990, doubling in the noughties and then becoming eight times bigger in the 2010s; the majority (84%) of the 19 included studies appeared in the 2010s alone. The finding supports the initial observation that, recently, the use of the term is used more frequently in the literature. Furthermore, the earliest eligible study appeared in the late nineties while no study was identified after 2018. This sample of studies for the review may reveal that it took a while for the youth crime literature to incorporate the term vulnerability and perhaps 2013 and 2018 were peak uses of the term with three studies that met the inclusion criteria for each year. The term seems to have rode the wave of studies on youth crime examining victimization, poor mental health, trauma, or adverse childhood experiences generally that appeared about this time, reflecting the view that young people who offend suffer and should be viewed more sympathetically rather than the view that they are impulsive, chronic dangers to society and punitive measures can control them.

An especially striking finding was how meanings of vulnerability changed over time, whereby risk and social disadvantage connotations did not emerge until the 2010s. Based on the review, the initial meaning of vulnerability was situational. This stayed steady over the following decades, showing that the literature viewed justice-involved or at-risk young people as a group that needed extra provisions but was also considered a problem. In the 2000s, innate particular vulnerability emerged in the literature, possibly reflecting the increased interest in developmental approaches to offending. With the major theory of the developmental taxonomy (Moffitt, 1993), the interest in development and youth offending may have been cemented the following decade, with studies on adolescent cognition related to self-control and decision-

making (Cauffman & Steinberg, 2000; Mulvey et al., 2004; Steinberg, 2007). But risk and social disadvantage meanings appeared for the first time in the 2010s. This may be a manifestation of the decade before, with the rise and dominance of the risk factor approach (Farrington, 2000, 2007; Herrenkohl et al., 2000), and perhaps critical reactions to that research that emphasized life course transitions and causality (Sampson & Laub, 2003; Wikström, 2008).

Concerning risk, the use of vulnerability as an alternative in the past decade does signify a shift in thinking towards these young people. In fact, in other types of particular vulnerabilities, despite their characteristics not falling under the risk meaning, they could still be considered risk factors as understood in the developmental criminology literature. For example, living in poverty or possessing higher impulsivity due to adolescent development. Whether it be the saturated use of risk or the increasing pathologizing that the term took on, the recent substitute of vulnerability seems to indicate an emphasis that such risk factors are not the responsibility of the young person, but are characteristics whose origins are beyond the individual. The term risk implies imminent danger and that to engage is to do so on one's own account – “at your own peril” – whereas vulnerability seems to view these risk factors as external forces that may harm life outcomes of the young person, so requires caring support, even protection, and addressing of unmet needs while considering the intricacies of protective or resilient factors and interactions between individual and social characteristics. If perceiving research that uses risk and ones that uses vulnerability as a linear transition, it indicates that this research has evolved to incorporate more complexity.

4.2 Limitations

As with all reviews, not every study was included because of the specific criteria set for this narrative review. The purpose of systematically reviewing the literature, however, was to provide an opportunity for future replication that can update the review and can include other

studies that others may think were necessary. In addition, it was to reduce selection biases. Another limitation was the included studies themselves. The review did not prioritize quality of studies as it was not its focus. The studies were eligible for what they had to say about vulnerability and, therefore, a reflection of the wider literature on youth crime; it was not about the rigor of their methods, for example.

4.3. Conclusion: Research and real-world implications

Returning to some questions posed in the introduction, we wondered whether the use of vulnerability was merely a term that reflected the spirit of current youth crime research. There is truth to this observation based on the present narrative review. With irrefutable evidence that punitive measures do not work and advances in knowledge about who the young people are who offend, why they do so, and in what circumstances they do so, the use of vulnerability reflects a softening view. This is indicated by the rise in studies that use vulnerability in the past three decades and the term appearing in studies that would have traditionally used “risk”.

Another question pondered was whether skepticism should be given to the prominent use of vulnerability because of potential latent motives. A healthy dose of skepticism never hurts, but to be cynical in hopes of appearing critical is another. What studies talked about when they talked about vulnerability was a particular vulnerability, viewing certain persons as more susceptible to offending than others, and therefore, in need of more assistance. The use of particular vulnerability is also indicative of the current state we live in, where universal vulnerability barely exists, at least in the US and UK. As Herring (2016b) noted, individualist independence is an illusion, but in a society that de-emphasizes universal vulnerability, we are made to believe some are vulnerable – unable to pursue individual goals and endeavors – and some are not. The consequences are that empathy is stunted and those perceived as vulnerable are responded with monitoring, supervision, and discipline, which can be perceived as

punishing. Even with good intentions and a more sympathetic understanding of young people who offend, the use of only particular vulnerability in these studies reflects the inherent social inequality of the everyday.

The last question posed in the introduction had to do with whether vulnerability could be a meaningful concept for understanding youth crime. The review reaches similar conclusions as previous ones such as Delor and Hubert (2000) and Virokannas et al. (2020), albeit tailored and refined to the youth crime literature. The underlying meaning that our review seemed to indicate was a recognition that these young people have had adverse experiences that have generated unmet needs and, because of who they are or their specific circumstances, find themselves unfavorably exposed to social institutions. For if a young person is, say, wealthy and white, they would be less likely to have undesirable interactions with the justice system, although they may have unmet needs and adverse experiences such as child maltreatment. But hidden and protected by their status, they are not detected or dealt with negatively by the state.

The use of vulnerability in the youth crime literature reveals a progression in knowledge on young people who offend, considering the complexities of causal relationships and networks, including interactions, among a variety of characteristics. It is also aligned with the current research trends on victimization, trauma, poor mental health, and adverse childhood experiences in explaining why young people offend. There is, indeed, a risk that this is translated into problematizing these young people in policy and practice, if not already, but in using vulnerability as recognition instead, in other words an acknowledgement of where they have come from, real-world applications might better aspire towards creating the infrastructure for genuine, sustained support.

References

*studies included in narrative review

- Bartkowiak-Théron, I., Asquith, N. L., & Roberts, K. A. (2017). Vulnerability as a Contemporary Challenge for Policing. In N. L. Asquith, I. Bartkowiak-Théron, & K. A. Roberts (Eds.), *Policing Encounters with Vulnerability*. Palgrave MacMillan.
- Baumeister, R. F., & Leary, M. R. (1997). Writing Narrative Literature Reviews. *Annual Review of Psychology*, 1(3), 311–320.
- Boldt, J. (2019). The concept of vulnerability in medical ethics and philosophy. *Philosophy, Ethics, and Humanities in Medicine*, 14(1), 1–8. <https://doi.org/10.1186/s13010-019-0075-6>
- Bracken-Roche, D., Bell, E., & Racine, E. (2016). The “vulnerability” of psychiatric research participants: Why this research ethics concept needs to be revisited. In *Canadian Journal of Psychiatry* (Vol. 61, Issue 6, pp. 335–339). SAGE Publications Inc. <https://doi.org/10.1177/0706743716633422>
- Brown, K. (2017). *Vulnerability and young people: Care and social control in policy and practice*. Policy Press.
- Brown, K., Ecclestone, K., & Emmel, N. (2017). The many faces of vulnerability. *Social Policy and Society*, 16(3), 497–510. <https://doi.org/10.1017/S1474746416000610>
- Brunton, V. J., Stansfield, C., Caird, J., & Thomas, J. (2017). Finding relevant studies. In D. Gough, S. Oliver, & J. Thomas (Eds.), *An introduction to systematic reviews* (pp. 93–122). Sage.
- Cauffman, E., & Steinberg, L. (2000). (Im)maturity of judgment in adolescence: why adolescents may be less culpable than adults. *Behavioral Sciences & the Law*, 18(6), 741–760. <https://doi.org/10.1002/bsl.416>

- *Day, A. M. (2017). Hearing the voice of looked after children: Challenging current assumptions and knowledge about pathways into offending. *Safer Communities*, 16(3), 122–133. <https://doi.org/10.1108/SC-01-2017-0003>
- Delor, F., & Hubert, M. (2000). Revisiting the concept of “vulnerability.” *Social Science and Medicine*, 50(11), 1557–1570. [https://doi.org/10.1016/S0277-9536\(99\)00465-7](https://doi.org/10.1016/S0277-9536(99)00465-7)
- *Ezechukwu, R. N. (2014). *Using youth perspectives to examine antisocial behavior: A qualitative investigation of the juvenile offender in context* (Vol. 369, Issue 1). <https://doi.org/10.1017/CBO9781107415324.004>
- Farrington, D. P. (2000). Explaining and preventing crime: The globalisation of knowledge — The American Society of Criminology 1999 Presidential Address. *Criminology*, 38(1), 1–24. <https://doi.org/10.1111/j.1745-9125.2000.tb00881.x>
- Farrington, D. P. (2007). Childhood risk factors and risk-focussed prevention. In M. Maguire, R. Morgan, & R. Reiner (Eds.), *The Oxford Handbook of Criminology* (4th ed., pp. 602–640). Oxford University Press.
- Farrington, D. P., & Jolliffe, D. (2017). Special issue on systematic reviews in criminology. *Aggression and Violent Behavior*, 33, 1–3. <https://doi.org/10.1016/j.avb.2017.01.020>
- *Fine, A., Mahler, A., Steinberg, L., Frick, P. J., & Cauffman, E. (2017). Individual in Context: The Role of Impulse Control on the Association between the Home, School, and Neighborhood Developmental Contexts and Adolescent Delinquency. *Journal of Youth and Adolescence*, 46(7), 1488–1502. <https://doi.org/10.1007/s10964-016-0565-4>
- Fineman, M. A. (2011). The vulnerable subject and the responsive state. *Emory Law Journal*, 60(251), 1–41. <https://papers.ssrn.com/abstract=1694740>
- Fineman, M. A. (2013). Feminism, masculinities, and multiple identities. *Nevada Law Journal*, 13(2), 619–639. <https://doi.org/10.1007/BF02698668>
- Fineman, M. A. (2017). Vulnerability and Inevitable Inequality. *Oslo Law Review*, 1(03),

133–149. <https://doi.org/10.18261/issn.2387-3299-2017-03-02>

Greenhalgh, T., Thorne, S., & Malterud, K. (2018). Time to challenge the spurious hierarchy of systematic over narrative reviews? *European Journal of Clinical Investigation*, 48(6), 1–6. <https://doi.org/10.1111/eci.12931>

*Hayden, C. (2008). Education, schooling and young offenders of secondary school age. *Pastoral Care in Education*, 26(1), 23–31. <https://doi.org/10.1080/02643940701848588>

Herrenkohl, T. I., Maguin, E., Hill, K. G., Hawkins, J. D., Abbott, R. D., & Catalano, R. F. (2000). Developmental risk factors for youth violence. *The Journal of Adolescent Health : Official Publication of the Society for Adolescent Medicine*, 26(3), 176–186. <http://www.ncbi.nlm.nih.gov/pubmed/10706165>

Herring, J. (2016a). Health as vulnerability; interdependence and relationality. *New Bioethics*, 22(1), 18–32. <https://doi.org/10.1080/20502877.2016.1151255>

Herring, J. (2016b). Vulnerable Adults and the Law. In *Vulnerable Adults and the Law*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780198737278.001.0001>

Herring, J. (2020). Ageing and universal beneficial vulnerability. In *Embracing Vulnerability* (pp. 63–78). Routledge. <https://doi.org/10.4324/9781351105705-6>

*Kingery, P. M., McCoy-Simandle, L., & Clayton, R. (1997). Risk factors for adolescent violence: the importance of vulnerability. *School Psychology International*, 18, 49–60.

Kottow, M. H. (2005). Vulnerability: what kind of principle is it? *Medicine, Health Care, and Philosophy*, 7(3), 281–287. <https://doi.org/10.1007/s11019-004-6857-6>

Lajoie, C., Poleksic, J., Bracken-Roche, D., MacDonald, M. E., & Racine, E. (2020). The Concept of Vulnerability in Mental Health Research: A Mixed Methods Study on Researcher Perspectives. *Journal of Empirical Research on Human Research Ethics*, 15(3), 128–142. <https://doi.org/10.1177/1556264620902657>

*Lim, S. S., Basnyat, I., Vadrevu, S., & Chan, Y. H. (2013). Critical literacy, self-protection

- and delinquency: The challenges of participatory media for youths at-risk. *Learning, Media and Technology*, 38(2), 145–160. <https://doi.org/10.1080/17439884.2013.756515>
- Lloyd, C. (1998). Risk factors for problem drug use: Identifying vulnerable groups. *Drugs: Education, Prevention and Policy*, 5(3), 217–232.
<https://doi.org/10.3109/09687639809034084>
- Loeber, R. (1990). Development and risk factors of juvenile antisocial behavior and delinquency. *Clinical Psychology Review*, 10(1), 1–41. [https://doi.org/10.1016/0272-7358\(90\)90105-J](https://doi.org/10.1016/0272-7358(90)90105-J)
- *Logan-Greene, P., Nurius, P. S., Herting, J. R., Hooven, C. L., Walsh, E., & Thompson, E. A. (2011). Multi-domain risk and protective factor predictors of violent behavior among at-risk youth. *Journal of Youth Studies*, 14(4), 413–429.
<https://doi.org/10.1080/13676261.2010.538044>
- *McAra, L., & McVie, S. (2010). Youth crime and justice: Key messages from the Edinburgh Study of Youth Transitions and Crime. *Criminology & Criminal Justice*, 10(2), 179–209. <https://doi.org/10.1177/1748895809360971>
- *McAra, L., & McVie, S. (2016). Understanding youth violence: The mediating effects of gender, poverty and vulnerability. *Journal of Criminal Justice*, 45, 71–77.
<https://doi.org/10.1016/j.jcrimjus.2016.02.011>
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: a developmental taxonomy. *Psychological Review*, 100(4), 674–701.
<http://psycnet.apa.org/journals/rev/100/4/674/>
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *BMJ (Online)*, 339(7716), 332–336. <https://doi.org/10.1136/bmj.b2535>
- *Mowder, M. H., Cummings, J. A., & McKinney, R. (2010). Resiliency scales for children

- and adolescents: Profiles of juvenile offenders. *Journal of Psychoeducational Assessment*, 28(4), 326–337. <https://doi.org/10.1177/0734282910366838>
- Mulvey, E. P., Steinberg, L., Fagan, J., Cauffman, E., Piquero, A. R., Chassin, L., Knight, G. P., Brame, R., Schubert, C. A., Hecker, T., & Losoya, S. H. (2004). Theory and Research on Desistance from Antisocial Activity among Serious Adolescent Offenders. *Youth Violence and Juvenile Justice*, 2(3), 213–236. <https://doi.org/10.1177/1541204004265864>
- Neal, M. (2020). The idea of vulnerability in healthcare law and ethics: From the margins to the mainstream? In D. Bedford & J. Herring (Eds.), *Embracing Vulnerability: The Challenges and Implications for Law*. Routledge.
- *Newsome, J. (2013). *Resilience and vulnerability in adolescents at risk for delinquency: a behavioral genetic study of differential response to risk*. University of Cincinnati.
- *Newsome, J., & Sullivan, C. J. (2014). Resilience and Vulnerability in Adolescents: Genetic Influences on Differential Response to Risk for Delinquency. *Journal of Youth and Adolescence*, 43(7), 1080–1095. <https://doi.org/10.1007/s10964-014-0108-9>
- *Norström, T., Rossow, I., & Pape, H. (2018). Social inequality in youth violence: The role of heavy episodic drinking. *Drug and Alcohol Review*, 37(2), 162–169. <https://doi.org/10.1111/dar.12582>
- *Pauwels, L. J. R., Vettenburg, N., Gavray, C., & Brondeel, R. (2011). Societal vulnerability and troublesome youth group involvement: The mediating role of violent values and low self-control. *International Criminal Justice Review*, 21(3), 283–296. <https://doi.org/10.1177/1057567711419899>
- Sampson, R. J., & Laub, J. H. (2003). Life-Course Desisters? Trajectories of Crime Among Delinquent Boys Followed To Age 70*. *Criminology*, 41(3), 555–592. <https://doi.org/10.1111/j.1745-9125.2003.tb00997.x>

Siddaway, A. P., Wood, A. M., & Hedges, L. V. (2019). How to Do a Systematic Review: A Best Practice Guide for Conducting and Reporting Narrative Reviews, Meta-Analyses, and Meta-Syntheses. *Annual Review of Psychology*, 70(1), 747–770.

<https://doi.org/10.1146/annurev-psych-010418-102803>

Singh, J. P., Desmarais, S. L., Sellers, B. G., Hylton, T., Tirotti, M., & Van Dorn, R. A. (2014). From risk assessment to risk management: Matching interventions to adolescent offenders' strengths and vulnerabilities. *Children and Youth Services Review*, 47(P1), 1–9. <https://doi.org/10.1016/j.childyouth.2013.09.015>

Steinberg, L. (2007). Risk Taking in Adolescence: New Perspectives From Brain and Behavioral Science. *Current Directions in Psychological Science*, 16(2), 55–59. <https://doi.org/10.1111/j.1467-8721.2007.00475.x>

Tarolla, S. M., Wagner, E. F., Rabinowitz, J., & Tubman, J. G. (2002). Understanding and treating juvenile offenders: A review of current knowledge and future directions. *Aggression and Violent Behavior*, 7(2), 125–143. [https://doi.org/10.1016/S1359-1789\(00\)00041-0](https://doi.org/10.1016/S1359-1789(00)00041-0)

*Vettenburg, N., Brondeel, R., Gavray, C., & Pauwels, L. J. R. (2013). Societal vulnerability and adolescent offending: The role of violent values, self-control and troublesome youth group involvement. *European Journal of Criminology*, 10(4), 444–461. <https://doi.org/10.1177/1477370812470777>

*Viljoen, J. L., Beneteau, J. L., Gulbransen, E., Brodersen, E., Desmarais, S. L., Nicholls, T. L., & Cruise, K. R. (2012). Assessment of Multiple Risk Outcomes, Strengths, and Change with the START:AV: A Short-Term Prospective Study with Adolescent Offenders. *International Journal of Forensic Mental Health*, 11(3), 165–180. <https://doi.org/10.1080/14999013.2012.737407>

Virokannas, E., Liuski, S., & Kuronen, M. (2020). The contested concept of vulnerability—a

literature review: Vulnerability-käsitteen kiistanalaiset merkitykset—systemaattinen kirjallisuuskatsaus. *European Journal of Social Work*, 23(2), 327–339.

<https://doi.org/10.1080/13691457.2018.1508001>

Weissman, J. (2019). Vulnerability and Obligation in Science and Medicine. *The Journal of Medicine and Philosophy: A Forum for Bioethics and Philosophy of Medicine*, 44(3), 263–278. <https://doi.org/10.1093/jmp/jhz006>

*Wiesner, M., & Windle, M. (2004). Assessing covariates of adolescent delinquency trajectories: A latent growth mixture modeling approach. *Journal of Youth and Adolescence*, 33(5), 431–442. <https://doi.org/10.1023/B:JOYO.0000037635.06937.13>

Wikström, P.-O. H. (2008). In search of causes and explanations of crime. In R. D. King & E. Wincup (Eds.), *Doing research on crime and justice* (pp. 117–140). Oxford University Press.

*Wikström, P. O. H., Mann, R. P., & Hardie, B. (2018). Young people's differential vulnerability to criminogenic exposure: Bridging the gap between people- and place-oriented approaches in the study of crime causation. *European Journal of Criminology*, 15(1), 10–31. <https://doi.org/10.1177/1477370817732477>

Wisner, B. (1993). Disaster vulnerability: Scale, power and daily life. *GeoJournal*, 30(2), 127–140. <https://doi.org/10.1007/BF00808129>

Wisner, B. (2016). Vulnerability as Concept, Model, Metric, and Tool. In *Oxford Research Encyclopedia of Natural Hazard Science* (Issue June, pp. 1–51). Oxford University Press. <https://doi.org/10.1093/acrefore/9780199389407.013.25>

Young, S., Greer, B., & Church, R. (2017). Juvenile delinquency, welfare, justice and therapeutic interventions: a global perspective. *BJPsych Bulletin*, 41(1), 21–29. <https://doi.org/10.1192/pb.bp.115.052274>

Youth Justice Board. (2019). *Youth justice statistics 2018/19 England and Wales*.

*Zavala, E. (2018). Target Congruence Theory and the Victim-Offender Overlap Among Male Youths. *Victims and Offenders*, 13(7), 1013–1032.

<https://doi.org/10.1080/15564886.2018.1520765>