



How do the police define, identify, and respond to vulnerability?

By

Scott Keay

Student id: G20699018

A thesis submitted in partial fulfilment for the requirements for the degree of Doctor of Philosophy, at the University of Central Lancashire.

Student declaration

I, Scott Keay, confirm that the work presented in this thesis is my own work. Where information has been derived from other sources, I can confirm that this has been cited accordingly.

A handwritten signature in black ink, appearing to read 'Scott Keay', with a period at the end.

Date: 17th July 2023

Abstract

Vulnerability has become a vogue term in policing during the years since 2010. In the UK, austerity measures have meant that the police have had to think carefully about how and where they focus their reducing resources. Cuts to a variety of public services have also contributed to an increase in demand for police assistance. Focusing on vulnerable people has been seen as one way of reducing this demand, which has led to a rise in research into policing vulnerability. However, the term 'vulnerability' has become pervasive in policing and approaches to tackling vulnerability have not been translated consistently into practice. Part of the problem has been a lack of clarity from senior police leaders and police governing bodies about what policing vulnerability means, and yet, front-line practitioner views are consistent with academic research, particularly around the issues of defining, identifying, and responding to vulnerability.

This thesis makes a unique contribution to the growing academic debate regarding the policing of vulnerable people. It uses a mixed methods approach as a means of triangulating the research to improve consistency in its findings. This includes a focus group of police practitioners and quantitative research of 3 sets of police recorded data. The direct access to police data has allowed this thesis to research and present an original contribution to knowledge in how policing deals with vulnerability. Ultimately, this thesis argues that the concept of vulnerability in policing is an essential one. Whilst practitioners found that it was confusing, it did focus police activity to support those in need. This thesis found that police recorded data holds some significant and valuable findings about recorded vulnerability. The recording of vulnerability was inconsistent across different data sets used by the police, and this made it difficult to ascertain levels of repeat victimisation, which should be regarded as a priority vulnerability that is targeted by the police. However, analysis was able to show that vulnerability is a consistent demand across the 7-day week and is linked to routine activities theory.

To counter some of the draw backs of recorded data and staff confusion about vulnerability, this thesis has developed and presents an ecological approach to vulnerability. This model can direct police practitioners in overcoming identified flaws

and improve partnership working to ensure that those with the most complex needs are in receipt of appropriate services.

Acknowledgements

The journey to complete this thesis has not been an easy one and I could not have done it without the support of an amazing circle of family, friends and colleagues:

Firstly, I would like to thank Professor Sarah Kingston and Dr Bernie Sheridan. Your knowledge, support and guidance has pushed me across the finish line.

The journey started with Professor Stuart Kirby: thank you for sharing your wisdom and sticking with me despite semi-retirement.

To Professor Ken and Judy Pease: I adore your friendship and you have no idea how much your encouragement and belief in me has spurred me on.

To Nathan Birdsall for developing my knowledge of statistical tests (when we weren't discussing gaming or other random stuff)!

To my proof-readers (also fab friends and colleagues): Dr Becky Phythian and Dr Jude Towers. Thank you for your feedback and support.

Along the way I have been supported by a fantastic supporting cast during the 'ups and downs' of research: Andrew Wright (for listening, encouragement and meals!), Phill Pollard (for data support), and Dr Emily Cooper (for the writing workshops and support in the transfer viva).

To my family: thank you for not asking too many questions on my research!

I would like to thank my colleagues and current employers, Edge Hill University, for seeing the academic in me and supporting my PhD journey.

A huge 'thank you' to the police force that allowed me access to their data and staff, without which, this would not be possible.

And of course, my two boys: Isaac and Samuel. I hope my achievement makes you as proud of me as I am of you two.

Table of contents

List of tables	11
List of figures	12
Glossary of abbreviations	13
Dissemination of research findings	15
Publications	15
Presentations	15
Chapter 1: Introduction	16
Defining, identifying, and responding to vulnerability in a policing context.....	16
<i>The Problem</i>	16
<i>Unpicking the problem</i>	17
<i>Researching the problem</i>	18
<i>Structure of the thesis</i>	19
Chapter 2: Literature Review	22
Aims of chapter	22
Defining vulnerability	23
<i>Defining vulnerability: the academic literature</i>	24
<i>Vulnerability and related terminology</i>	31
<i>Problems with the concept of vulnerability</i>	34
<i>Defining vulnerability for operational policing</i>	36
<i>Defining vulnerability: a summary</i>	42
Identifying vulnerability.....	44
<i>Types of vulnerability, key determinants and aggravating factors</i>	45
<i>Attributes of physical or personal vulnerability</i>	46
<i>Attributes of social and familial vulnerability</i>	50
<i>Attributes of environmental and situational vulnerability</i>	52
<i>Vulnerability and crime</i>	53
<i>Vulnerability in health care and public health research</i>	58
<i>Identifying vulnerability: A Summary</i>	59
Responding to vulnerability.....	60
<i>Policing vulnerability as a new paradigm in police response</i>	61
<i>Criminal justice and special measures as a response to vulnerability</i>	63
<i>Using police data to proactively respond to vulnerability</i>	64
<i>Responding to complex problems through multi-agency partnerships</i>	65
<i>Developing the policing response to vulnerability</i>	68
<i>A convergence of disciplines: exploring the concept of a multi-disciplinary response to vulnerability</i>	69

<i>Responding to vulnerability: a summary</i>	71
<i>Chapter summary</i>	71
Limitations of previous research	73
Thesis Aims	74
Chapter 3: Methodology	75
Aims of chapter	75
Research design: A mixed methods approach	76
Researcher status	77
<i>Political stance</i>	79
Ethics	79
<i>Ethical considerations: use of participants</i>	79
<i>Ethical considerations: use of data</i>	79
<i>Ethical consideration: anonymising the source</i>	79
Research method 1: Qualitative research and exploratory focus group	80
<i>Qualitative data from an exploratory focus group</i>	80
Research method 2: Quantitative research: the use of police recorded data	84
<i>Quantitative data from a UK Police Force</i>	84
<i>Methods of data analysis</i>	85
<i>Recorded Incident data</i>	87
<i>Recorded crime data</i>	88
<i>Recorded PVP referral data</i>	88
Rationalising the literature	89
Limitations	89
<i>Limitations with exploratory focus group</i>	90
<i>Limitations of using administrative data</i>	90
<i>Dealing with missing data</i>	92
<i>External limitations</i>	92
Summary of chapter	93
Chapter 4: Using recorded police data for research	94
Aims of chapter	94
The police force in this study	94
<i>Police legitimacy</i>	97
Calls for service	98
Responding to a call for assistance	99
<i>The crime recording process</i>	99
<i>When a call is received</i>	103
<i>Recorded data and the use of 'data markers'</i>	105
<i>Other police forces and recorded data</i>	105

Conclusion	106
Chapter 5: Findings from the practitioner focus group.....	107
Aims of chapter	107
Focus group questions and answers.....	107
<i>Question 1 and 2: What is Vulnerability and who is vulnerable?</i>	108
<i>Question 3 and 4: why should we police vulnerability and how should the police do it?</i>	113
<i>Question 5: what evidence-base do we need?</i>	117
Themes of vulnerability	120
<i>Themes of vulnerability: the conceptual</i>	120
<i>Themes of vulnerability: the operational</i>	121
Chapter summary	122
Chapter 6: Findings from police recorded incident data	123
Aims of chapter	123
What is an incident?.....	124
<i>Recorded incidents and vulnerable markers</i>	125
Recorded incident data sample	126
<i>Annual trend of recorded incidents</i>	128
<i>Opening class of incidents</i>	129
<i>Calls for service: who calls the police?</i>	132
<i>Recorded incidents from ‘the caller’</i>	133
<i>Victim as caller: location</i>	134
<i>Incidents and day of week</i>	135
<i>Incidents and hour of day</i>	138
<i>Day of week and hour</i>	139
<i>Impact of the caller on recorded hour of day</i>	140
Chapter summary	142
Chapter 7: Findings from police recorded crime data	145
Aims of chapter	145
What is a crime?	146
<i>Recorded crime statistics and hidden crime</i>	147
Recorded crime data sample.....	148
<i>Annual crime trend</i>	149
<i>Vulnerability and location</i>	152
<i>Gender and vulnerability</i>	156
<i>Age, ethnicity and vulnerability</i>	157
<i>Repeat victimisation and vulnerability</i>	159
<i>Crime and day of week</i>	160
<i>How vulnerability affects the state of investigations</i>	163

Chapter summary	167
Chapter 8: Findings from police recorded PVP data.....	170
Aims of chapter	170
What is ‘protecting vulnerable people’?.....	171
Recorded PVP data sample	173
<i>Description of data fields</i>	<i>174</i>
<i>PVP event description (primary reason)</i>	<i>175</i>
<i>Referral reasons</i>	<i>176</i>
<i>PVP and gender</i>	<i>178</i>
<i>PVP gender and age.....</i>	<i>178</i>
<i>Gender and ethnicity.....</i>	<i>179</i>
<i>Temporal (daily) pattern for PVP event.....</i>	<i>182</i>
<i>PVP repeat referrals</i>	<i>183</i>
Linking data sets: PVP, incidents and crime	184
<i>PVP referrals and recorded incidents</i>	<i>184</i>
<i>PVP referrals and recorded crimes</i>	<i>185</i>
Chapter summary	187
Chapter 9: An ecological approach to understanding vulnerability	190
Aims of chapter	190
<i>Taking an ecological approach to visualising vulnerability.....</i>	<i>191</i>
<i>An ecological approach as a tool to improve a policing response</i>	<i>192</i>
<i>Layers of vulnerability and social division</i>	<i>195</i>
<i>Individual layer: physical or personal attributes</i>	<i>195</i>
<i>Social layer: social, family and associations.....</i>	<i>196</i>
<i>Situational layer: environmental and situational.....</i>	<i>196</i>
<i>External layer: wider societal impacts.....</i>	<i>197</i>
Improving the policing response to vulnerability	198
Chapter summary	199
Chapter 10: Discussion of findings.....	200
Aims of chapter	200
Revisiting the aims of the research	201
Defining vulnerability	203
Identifying vulnerability.....	208
<i>What can be learnt about vulnerability from police recorded data</i>	<i>209</i>
<i>Using police recorded data in an ecological approach for responding to vulnerability.....</i>	<i>214</i>
Responding to vulnerability.....	215
Implications for theory.....	217
<i>Implications for practice.....</i>	<i>218</i>

Original contribution to knowledge	220
<i>Limitations of research</i>	222
<i>Considerations for future research</i>	225
Chapter 11: Conclusion.....	227
Reference List	229
References removed.....	301
Appendices	302
Appendix 1: How the police define, identify and respond to vulnerability: Executive Summary Report to support operational policing.	302
<i>Background</i>	302
<i>Method</i>	303
<i>Findings</i>	303
<i>Improving the police response to vulnerability</i>	305
<i>Recommendations for police practice</i>	306
<i>References</i>	307
Appendix 2: Focus Group Comments table	308
Appendix 3: Code lists for quantitative data	309
Appendix 4: Flow chart showing process for data recording following a call for assistance by the police.	312
Appendix 5: PVP referral reason ID codes and description.....	313
Appendix 6: Participant information and consent forms.....	314
<i>Participant Information Sheet</i>	314
<i>Participant Consent Form</i>	316

List of tables

Table 6.1: The use of vulnerable qualifiers.....	126
Table 6.2: List of recorded incident fields.....	127
Table 6.3: Top 10 opening class for all recorded incidents 2017.....	130
Table 6.4: Opening class for all incidents and vulnerable-related incidents.....	131
Table 6.5: Caller details for all incidents.....	133
Table 6.6: Caller details for vulnerable-related incidents.....	133
Table 7.1: Vulnerable qualifiers and victims of crime.....	149
Table 7.2: Category of place from 'type of place' code.....	154
Table 7.3: Crimes recorded on a Sunday.....	163
Table 7.4: Outcome and HOC crime group for vulnerable victims.....	166
Table 7.5: Outcome and HOC crime group for non-vulnerable victims.....	166
Table 8.1: PVP data fields extracted for analysis.....	174
Table 8.2: Risk level and referral reason.....	176
Table 8.3: PVP referral reason ID codes and description.....	177
Table 8.4: Gender of PVP lead referral.....	178
Table 8.5: Gender and age group of lead referrals.....	179
Table 8.6: PVP gender and ethnicity.....	180
Table 8.7: PVP referrals and vulnerable-related incidents.....	184
Table 8.8: PVP referrals and vulnerable-related crimes.....	185
Table 8.9: Attribution of vulnerability and crime groups.....	186
Table 8.10: Ranking of offence groups by vulnerability.....	186
Table 10.1: Recorded data and vulnerability markers.....	209

List of figures

Figure 2.1: The volume of research publications featuring search terms ‘police’ and ‘vulnerable’ or ‘vulnerability’	26
Figure 2.1: Recorded incidents and vulnerable related incidents.	128
Figure 6.2: All recorded incidents by weekday.....	136
Figure 6.3: Vulnerable-related incidents reported by staff and by victims.	137
Figure 6.4: All recorded incidents by hour of day.....	138
Figure 6.5: Recorded incidents by victim as caller (Saturday and Sunday).....	140
Figure 6.6: Recorded incidents by staff on duty as caller (Saturday and Sunday).	141
Figure 7.1: Annual recorded crime trend for the area 2017.	150
Figure 7.2: Annual victim trend with and without vulnerable qualifiers.....	151
Figure 7.3: Crime victims and age.....	158
Figure 7.4: Day of week for all crime.	161
Figure 7.5: Recorded vulnerability by day.....	162
Figure 8.1: Temporal pattern and PVP primary referral reason.	181
Figure 8.2: Gender of lead referral by day of referral.....	182
Figure 9.1: WHO social-ecological model of health.....	192
Figure 9.2: An ecological approach to understanding vulnerability in a policing context.....	194
Figure A.4.1: Calls for service and police recorded data.....	312

Glossary of abbreviations

Abbreviation A-M	Full Title
ACE	Adverse Childhood Experiences
ADR	Annual Data Requirements
AL	Alcohol
APP	Authorised Professional Practice
ASB	Anti-Social Behaviour
ASBO	Anti-Social Behaviour Order
BCU	Basic Command Unit
CAF	Common Assessment Framework
CCGs	Clinical Commissioning Groups
CHI	Cambridge Harm Index
CIT	Crisis Intervention Team
CJS	Criminal Justice System
CON	Continuum of Need
CPS	Crown Prosecution Service
CSE	Child Sexual Experience
CSEW	Crime Survey of England
CSS	Crime Severity Score
CSV	Comma Separated Value
CTC	Communities That Care
DA	Domestic Abuse
DR	Drugs
DV	Domestic Violence
DVPO	Domestic Violence Protection Order
EBP	Evidence Based Policing
FCR	Force Control Room
HMIC	Her Majesties Inspectorate of Constabularies
HMICFRS	Her Majesties Inspectorate of Constabularies and Fire and Rescue Services
HOC	Home Office Classification
HOOCR	Home Office Crime Recording
ICVS	International Crime Victims Survey
JSNA	Joint Strategic Needs Assessment
MASH	Multi-Agency Safeguarding Hub
MH	Mental Health
MO	Modus Operandi
MOPI	Management of Police Information

Abbreviation N-W	Full Title
NCA	National Crime Agency
NCPE	National Centre of Police Excellence (now College of Policing)
NCRS	National Crime Recording Standards
NCVS	National Crime Victims Survey (USA)
NFA1	No Fixed Address
NFA2	No Further Action
NHS	National Health Service
NICL	National Incident Category List
NPCC	National Police Chiefs Council
NPIA	National Police Improvement Agency (now College of Policing)
NSIR	National Standard of Incident Recording
OPCC	Office of the Police and Crime Commissioner
PAT	Problem Analysis Triangle
PCC	Police and Crime Commissioner
PEEL	Policing Effectiveness, Efficiency, Legitimacy
PEQF	Police Education Qualification Framework
POP	Problem Oriented Policing
PVP	Protecting Vulnerable People
RAT	Routine Activity Theory
RV	Repeat Victimisation
SQL	Sequel Querying Language
SSMS	Sequel Server Management Studio
VC	Vulnerable Child
VP	Vulnerable Person
VU	Vulnerable
WHO	World Health Organisation

Dissemination of research findings

Publications

The following publications were based on findings presented in this thesis:

1. Keay, S. and Kirby, S., 2018. Defining Vulnerability: From the Conceptual to the Operational. *Policing: A Journal of Policy and Practice*, 12(4), 428–438.
2. Keay, S., 2019. How do the police define, identify and respond to vulnerability? In Bartkowiak-Théron, I. and Asquith, N.L., 2019. *Policing Vulnerable People*. TILES (Tasmanian Institute of Law Enforcement Studies). No 14, July 2019.
3. Keay, S., 2020. Policing definitions on vulnerability: do we need one? In Asquith, N.L. and Bartkowiak-Théron, I., 2020. *Policing Practices & Vulnerable People*. Cham, Switzerland: Routledge.
4. Keay, S. and Towers, J., (In press: 2024). The collection and understanding of administrative data in UK police forces. Huey, L. and Buil-Gil, D., eds., *The Crime Data Handbook*. Bristol: Policy Press.

Presentations

The following presentations were based on the research involved in this thesis:

1. Keay, S., 2021. Defining and identifying vulnerability: A schism in policing. *Postgraduate Presentations*. UCLan, Online, January 2021.
2. Keay, S., 2020. Vulnerability and the police. *Policing Vulnerability*. Canterbury Christ Church University. Online, 2020.
3. Keay, S. and Kirby, S., 2018. Vulnerable People and Vulnerable Places. *Presented at the 26th Environmental Criminology and Crime Analysis conference*. Elche, Spain, July 2018.
4. Keay, S., 2017. How the police define, identify, and respond to vulnerability. *Poster presented to UCLan post-grad poster competition*, July 2017.
5. Keay, S., 2016. Defining Vulnerability. *Violence and Society Seminars*, Lancaster University, December 2016.

Chapter 1: Introduction

Defining, identifying, and responding to vulnerability in a policing context

The Problem

Since its origins in 1829, policing has had a wide agenda. The principles forming what would today be called its mission statement are known as the Peelian Principles in recognition of Sir Robert Peel's role in creating the force (Rogers and Lewis, 2007). Implicit in those founding principles is for policing to be citizen-focussed (Emsley, 2014). Policing is not simply about enforcing the law: police forces have routinely operated as a social service in managing complex problems involving vulnerable people and non-crime related incidents, e.g., anti-social behaviour (Punch and James, 2017; Punch and Naylor, 1973; Bittner, 1967). But the police have finite resources and therefore they need to prioritise specific areas on which to concentrate their activity. Austerity measures (2009 – 2019) led to years of decreasing budgets and shrinking resources, not just for police forces, but across the public sector (Addidle and Liddle, 2021; Millie, 2014). This has meant that police forces have had to consider new ways in tackling causes of the demand on their services (Boulton et al., 2017). Prioritising vulnerability has been regarded as one way of managing these demands and the pressures created by austerity (Higgins and Hales, 2016; College of Policing, 2015; Bartkowiak-Théron and Asquith, 2012a; Brown, 2012).

The demands on policing come from external governing bodies and the public. The concept of vulnerability has become a more explicit part of Her Majesty's Inspectorate of Constabularies and Fire and Rescue Services (HMICFRS) inspection process. However, dealing with vulnerable people, has not been clearly defined (HMICFRS, 2015). Yet police forces in England and Wales have marched on under the banner of 'supporting the most vulnerable' (Christmas and Srivastava, 2019). This has been given impetus by increasing pressure from external governing bodies, such as the HMICFRS and Police and Crime Commissioners, for police forces to meet the challenges of identifying and responding to the most vulnerable people in local communities (HMICFRS, 2015). This has led to a new agenda for police forces

that has been influenced by various external and political pressures leading to the police, and wider public services, *to be seen* to be doing something about the problem (Brown 2012; Herring and Henderson, 2011; Reiner, 2010). This has become more acute during the last few years, particularly during the period this research has been conducted. The political context around policing in relation to criticism and distrust has been magnified due to the Black Lives Matter (BLM) movement (Yadon, 2022), the murder of Sarah Everard and the subsequent Casey report (Lowerson, 2022). All of which only serves to ensure arguments of misogyny and institutional racism have not moved on since the publication of the Macpherson report in 1999 (Bartkowiak-Théron and Asquith, 2015; Rowe, 2013). This makes it difficult for the police extending help towards vulnerable people and groups who more likely to avoid police interactions (Asquith and Bartkowiak-Théron, 2021). The result being potentially wasted effort and resource by the police.

Unpicking the problem

Vulnerability is an attribute that is inherent with all living things: everyone has needs for survival and these can vary from person to person (Brown, 2017; Misztal, 2011; Fineman, 2010). Academics' definition of vulnerability shows little consensus and are unhelpful in operationalising the concept in ways which can be used in a practical harm reduction strategy (Menichelli, 2020; Wrigley and Dawson, 2016; Rogers and Coliandris, 2015; Luna, 2009). Much of the literature has been focussed on the theoretical aspects of vulnerability (Bartkowiak-Théron and Asquith, 2012a; Misztal, 2011; Fineman, 2010), qualitative understanding of the issues with distinct groups (Brown, 2017), the widening scope of categories of vulnerability (Luna and Vanderpoel, 2013; Luna 2009), vulnerable people in the criminal justice system (Dehaghani, 2021; 2019; 2017; Ewin, 2015), and the impact of policing (Shorrocks et al., 2019a; Boulton et al., 2017; Innes and Innes, 2013). Many researchers have also emphasised the importance of vulnerability and its growing influence on police response (Asquith and Bartkowiak-Théron, 2021; Christmas and Srivastava, 2019; Asquith et al., 2017). This has added to the expectation that the police will tackle the problem of vulnerability (Bartkowiak-Théron and Asquith, 2012a).

Despite problems of definition, vulnerability, as an attribute, has become a trigger for special attention by the police (Christmas and Srivastava, 2019). To consider

someone as vulnerable is a prediction that the person so labelled has a higher-than-normal probability of some future negative event occurring. Since it is the police who are now recording vulnerability, a reasonable presumption is that the future negative consequence is likely to have something to do with crime and disorder. As police activity looks to target and safeguard the most vulnerable, the police also look to improve legitimacy, whilst aiming to reduce long-term demand on their own resources, and in doing so, meet the pressures from growing inspections (Hough, 2020; HMICFRS, 2015; Wood and Beierschmitt, 2014). Therefore, the identification of vulnerability in a policing context should provide the leverage for increased resources. This thesis examines whether prioritising vulnerability as a concept has aided the police and delivered better outcomes for the public.

Researching the problem

The thesis recognises that vulnerability is ubiquitous within policing and focuses on events and people that the police record as being vulnerable (Asquith and Bartkowiak-Théron, 2021). This has been shaped by the literature that argues victims of crime and anti-social behaviour are more vulnerable. The thesis corrals current academic thinking surrounding vulnerability and compares this with the views and experiences of serving police officers, and against police recorded data. Specifically, it explores what the concept of 'vulnerability' means in an applied police environment and to discuss how this concept can be operationalised more effectively (Belur et al., 2020). This is timely and pertinent for police forces in England and Wales as they look to improve police education, training and critical thinking of future officers through the Police Education Qualification Framework (PEQF) (Wood, D.A., 2020; Norman and Williams, 2017). Therefore, this thesis adds an original contribution in how police forces can improve their response to vulnerability through improving police education.

The thesis explores recorded data from calls to the police, and as a result, is focussed on recorded callers and victims of crime and harm. The thesis recognises that suspects and offenders can also be or have vulnerable traits, which can be magnified when they go through the criminal justice system (Dehaghani, 2021; 2017; Asquith, Bartkowiak-Théron and Roberts, 2016). However, vulnerability of suspects and offenders are, at the time of this research, not captured in the custody data used

by the police force. The focus of this thesis was to explore those who contact the police and how the police define, identify and respond to vulnerability following first contact.

Structure of the thesis

The thesis begins by introducing the key concepts about vulnerability and is broken down into the three key areas: defining vulnerability, identifying vulnerability and responding to vulnerability. This second chapter offers an insight into the theoretical bases of what vulnerability is and how it has become a term commonly used in everyday public sector discourse through various definitions of vulnerability. The chapter considers a growing range of attributes that fall under personal, physical, social and environmental themes. It also considers the complexity of the concept of vulnerability and how policing approaches have attempted to simplify it, which can, and has, confused frontline practitioners.

The methodology for this thesis is covered in chapter 3. This includes the reasoning for a mixed-methods research design that was used to answer the research question: research included a focus group of policing practitioners and analysis of recorded police data. The methodology chapter explains the importance of triangulation as a means of comparing qualitative and quantitative approaches to research but also in its value for this thesis (Heale and Forbes, 2013; Bekhet and Zauszniewski, 2012; Doyle et al., 2009). This is supported by the 4th chapter, 'Using record police data for research'. Chapter 4 is devoted to describing the process for recording police data and where vulnerability might be 'captured in the system' (i.e., where, and how it might be collected in recorded data). This is to familiarise the reader with the strengths and limitations of using such data and how the research design used in this thesis can be transferable to similar future research.

Chapter 5 provides the findings from the practitioner focus group. The qualitative research was conducted to develop ideas about how practitioners viewed vulnerability in a practical setting. This was then used to frame the analysis of the quantitative data and to explore how recorded data might support or contradict practitioner views.

Chapters 6, 7 and 8, are dedicated to exploring three different sets of recorded police data. These chapters examine how the police might identify vulnerability in their data and how vulnerability is recorded. Data analysis includes chi-square tests of association to explore how various fields of data are associated (Grønmo, 2020; Matthews and Ross, 2010). This will, to some degree, offer an explanation of how the police record who is vulnerable. These chapters question whether recorded police data is fit for purpose to support research and policing practice regarding vulnerable people and if any lessons could be learned from existing police recording processes. These chapters argue that police officers cannot identify vulnerability through their recorded incident and recorded crime data, but they can be used to support further research. The final quantitative data set, protecting vulnerable people (PVP) referral data, offers the most comprehensive (of the three data sets) in identifying vulnerability in a policing context. However, the PVP data does demonstrate that dealing with vulnerability is not solely a policing responsibility, but predominantly for other agencies of which the police can only act as a broker (Bartkowiak-Théron and Asquith, 2012b). This also reinforces the need for operational guidance that can help direct and focus police practitioners to the most appropriate services to support vulnerable people. This is proposed in this thesis as an ecological approach to vulnerability.

Chapter 9 proposes the use of an ecological approach to vulnerability to support practitioners in understanding the various layers of vulnerability (Luna, 2009). This model is based on the findings from this thesis and the model is intended as a means of directing practitioners in to how to identify and develop intelligence and data on vulnerability. It can also be useful to identify which agencies the police might need to direct vulnerable people to for further support when dealing with vulnerability falls beyond the remit of the police. This was also published as an early development of this thesis (Keay and Kirby, 2018).

Chapter 10 provides a general discussion, specifically, the main findings of the research in answer to each aspect of the research question: how do the police define, identify and respond to vulnerability? It develops a knowledge base around vulnerability in a policing context and where the police might want to direct organisational attention in supporting and safeguarding the most vulnerable people.

Finally, the thesis concludes with chapter 11 that offers a conclusion to the research that details the original contribution to knowledge and also provides recommendations to direct future police practice.

The findings from this research add an original contribution into policing vulnerability. It should be noted that the appendices include an executive summary of this thesis, which has been provided for the College of Policing and police forces. The aim of this summary is to highlight key findings and recommendations of how this research can be used to support policing policy, training, and practice.

Chapter 2: Literature Review

Aims of chapter

Since the late 1990's the nature of what police forces deal with has become more diverse and complex (Herrington and Colvin, 2016; Bartkowiak-Théron and Asquith, 2012a; Reiner, 2010). Whilst crime had been reducing, according to recorded crime, demand for police service through calls for service have not seen the same decreases (Kirby, 2020; Farrell et al., 2014; Sparrow, 2008). Furthermore, a growing community safety agenda has brought with it several policy changes that have pushed for improved multi-agency working and safeguarding (Menichelli, 2021; 2020). During the last 20 years, there has been a greater emphasis on dealing with complex events, the widening aspects of serious and organised crime, as well as problem families and vulnerable people (Herrington and Serbie, 2021; Vitale, 2017; Sparrow, 2016; Bartkowiak-Théron and Asquith, 2015). This has influenced academic and police interest in improving their understanding of vulnerability. However, until recently, there has been limited empirical research to explore how the police identify vulnerable people (Bartkowiak-Théron and Asquith, 2017). This thesis aims to contribute to this growing debate by addressing the research question, 'how do the police define, identify and respond to vulnerability?', and how this reflects the current focus on policing vulnerable people (Christmas and Srivastava, 2019; College of Policing, 2018; Brown, 2012). Answering the research question will assist police forces and the College of Policing with an evidence base to influence policy, training, and practice to support how the police deal with vulnerability. Ideally, this thesis will be able to support the recent education framework for new police officers and how this programme of learning can improve officer understanding of vulnerability and vulnerable people (Wood, D.A., 2020¹).

This current chapter is broken down into 5 sections. First, the chapter will explore how academics have understood and defined vulnerability. There are numerous

¹ Please note that there are two different author references that should be cited as Wood, 2020. Therefore, to separate them the author initials have been added.

definitions of vulnerability across several academic disciplines. For the purposes of this thesis, it will mostly examine vulnerability in the context of policing. Secondly, the chapter will explore how the police themselves have understood and defined vulnerability. Thirdly, the chapter will examine what this means for police procedure and practice. This will include how the College of Policing have used *indicative content*² to influence how future police officers are taught about vulnerability through the new police education qualification framework (PEQF) (May and Hunter, 2018; Ramshaw and Soppitt, 2018). The chapter will then assess the police response to dealing with vulnerability and vulnerable people. Finally, it will deconstruct the research question and detail the aims of this study.

Defining vulnerability

This section examines how vulnerability, vulnerable people, and vulnerable populations (i.e., categories of groups with certain traits) have been defined. However, wider literature suggests that this is perhaps a misleading, and sometimes harmful, way of categorising or labelling specific groups that can miss hidden vulnerabilities or how multiple vulnerabilities can interact to increase risk and harm for individuals. Defining vulnerability should provide a set of parameters for determining who is vulnerable and who is not (Cole, 2016; Bartkowiak-Théron and Asquith, 2012a; 2012b; Fineman, 2010). In essence, this should provide clear boundaries within which those dealing with the subject can operate. This is of particular importance to police forces who have traditionally defined areas of their business practice to determine how they operate, for example, dealing with criminal events is defined by Home Office crime codes (also known as HOC codes and referred to as HOC from herein), and this directs the policing response, i.e., what the police should do when faced with such an event (NPIA, 2011). Definitions and operational boundaries are important in policing as they have to ensure they meet standards set out by other agencies that they work with, such as the Criminal Justice Service (CJS) and various legal processes, both of which can influence policing activity. However, outside of legal frameworks, other areas of police work are not as

² Indicative content refers to the main topics covered in educational programmes.

easily or readily defined, such as how the police deal with vulnerability or vulnerable people. Therefore, it is important to establish what vulnerability is and who are (or might be) vulnerable within a policing context. Firstly, this section will explore existing definitions of vulnerability across the literature before exploring policing definitions.

Defining vulnerability: the academic literature

The Oxford dictionary definition explains vulnerability as the exposure to being harmed or attacked (Oxford Dictionary, 2022). Harmon (2015, p. 1) expands on this highlighting that it involves those individuals, "...easily harmed physically, mentally or emotionally. Vulnerable people are at a higher risk of being harmed". The origins of the word vulnerable reside in the Latin word 'vuln', which means to wound (Brown, 2017). In her monograph exploring vulnerable young people, Brown (2017) notes that the word vulnerable also has connotations of weakness. Weakness was also a significant feature in Nils Christie's (1986) seminal discussion on what makes the 'ideal victim'. Christie argued that the "ideal victim is weak compared to the unrelated offender" (Christie in Duggan, 2018, p. 13). He regards the ideal victim as a social status for someone who is defined by a set of characteristics that makes the victim subordinate and blameless (Duggan, 2018; Christie, 1986). His analysis makes several statements about societal view of victims (weak and powerless) and offenders (big, strong and dangerous) (Christie, 1986). It could be argued that there are similarities between Christie's 'ideal victim' and those regarded vulnerable, particularly by the police. A range of studies demonstrate a clear association exists between vulnerability and victimisation (Brown, 2017; Luna 2013; Bartkowiak-Théron and Asquith, 2012; Fineman, 2010; Walklate, 2007).

Academic literature is alive with the term of vulnerability³, but there has not been a consensus on what it actually means and there is certainly no consistency in its use (Rogers and Coliandris, 2015; Wrigley and Dawson, 2016). If anything, scholars have rather dissected the concept of vulnerability in attempts to explore what it means rather than agree on a clear definition that would better help researchers and

³ For example: Asquith and Bartkowiak-Théron, 2021; Addidle and Liddle, 2021; Kirby, 2020; Shorrock et al., 2019a; Brown, 2017; Wrigley and Dawson, 2016; Innes and Innes, 2013; Sparrow, 2008; Green, 2007; Christie 1986.

practitioners understand it. Researchers from various disciplines have examined what it actually means to be vulnerable in a variety of contexts, which shows the depth of vulnerability as a research interest. These areas include policing (Asquith and Bartkowiak-Théron, 2021; Asquith et al., 2017; Bartkowiak-Théron and Asquith, 2015; 2012), health (King, 2016; Appleton, 1994), ethics (Fineman, 2019; 2010), and medical ethics (Boldt, 2019) to name but a few. Munro and Scoular (2012) perhaps summarise the search for meaning in vulnerability and echoes the research of others (Bracken-Roche et al., 2017; Bartkowiak-Théron and Asquith, 2017; 2015) in that there is no agreed definition within academic literature:

“There has been an exponential rise in use of the term vulnerability across a number of political and policy arenas, including child protection, sexual offences, poverty, development, care for the elderly, patient autonomy, globalisation, war, public health and ecology. Yet despite its increasing deployment, the exact meaning and parameters of this concept remain somewhat elusive.” (Munro and Scoular, 2012, p. 189).

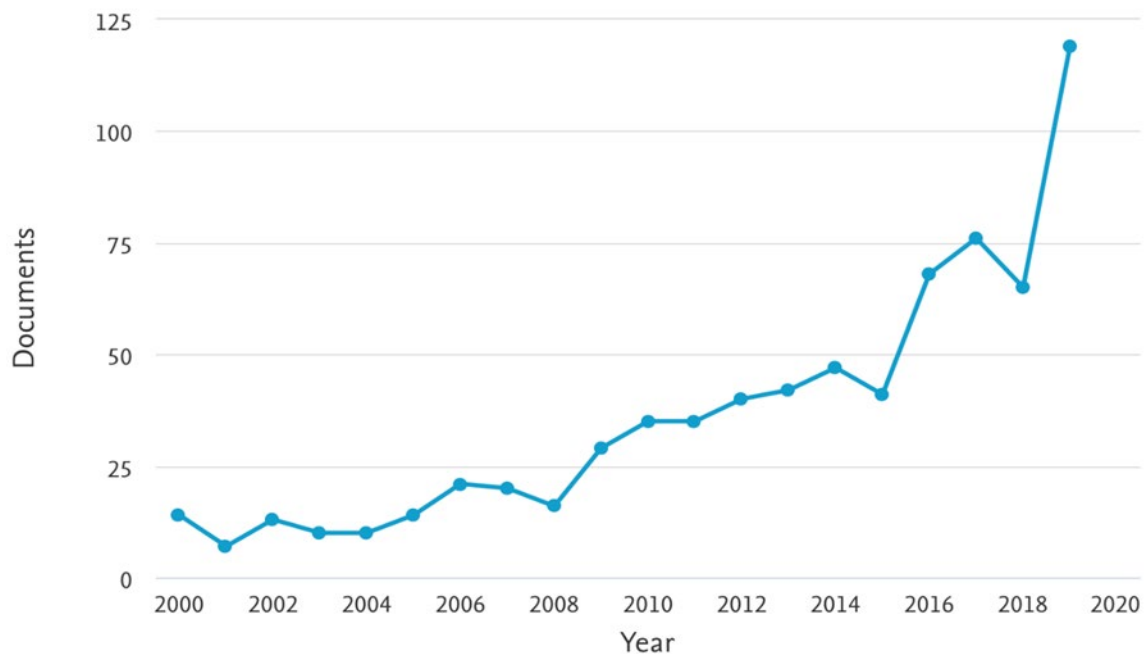
However, vulnerability and vulnerable people are terms used on a regular basis, particularly across the public sector and in the media (Bruning et al., 2020; Koivunen et al., 2018; Bartkowiak-Théron and Asquith, 2015; Brown, 2012; Chakraborti and Garland, 2012; Goggin, 2008). There have been significant discussions regarding the concept of vulnerability in academia, especially from a bioethics perspective and working with vulnerable patients (Cunha and Garrafa, 2016; Luna 2009). To explore vulnerability in academia in more detail a search was conducted to assess the appearance of vulnerability in the literature.

A Scopus⁴ review using the search terms ‘police’ and ‘vulnerable’ or ‘vulnerability’, showed that social science academic journal articles on these terms had risen from 14 in 2000 to 119 in 2019. This has been a steady rise over the last 20 years and, based on the publications that match the search parameters, this clearly

⁴ Scopus is an abstract and citation database of peer-reviewed literature: scientific journals, books and conference proceedings. It can provide an overview of research output in numerous. Scopus also features tools to track, analyse and visualize research. <https://www.scopus.com/home.uri>

demonstrates the growing research interest in the topic of vulnerability in a policing context.

Figure 2.1: The volume of research publications featuring search terms 'police' and 'vulnerable' or 'vulnerability'.



Brown (2017) provides a thorough assessment of the mapping of vulnerability across social policy and notes that there is little, and infrequent, references of the term until the 2000s, thus demonstrating the recent growing attention. At one level academics argue vulnerability can be viewed as a universal concept, inherent in all people, and core to the very nature of what it means to be human (Fineman, 2010). However, the subject eludes a precise or agreed definition, which compounds issues in its use as there is no consistency in its application.

Perhaps the efforts to deconstruct its meaning have been laborious to the point of obfuscating any attempt to provide a definition that has any meaning or practical application. Some argue a definition is not appropriate (Wrigley and Dawson, 2016), with Fineman (2010, p. 269) postulating that “variations amongst humans mean we have particular experiences of vulnerability”, therefore a simple definition would deny its complexity. Similarly, Wrigley (2015) claims that defining vulnerability offers little

to academia and questions the value of exploring it. Some resist a formal definition on wider, structural grounds. Green (2007, p. 94) argues:

“Even if vulnerability could be ordered and measured, such research would probably still fall into the positivist trap of ignoring the social processes that both label people as victims and define their appropriate responses to harm caused”.

Luna and Vanderpoel’s research (2013, p. 325) supports Green’s notions as they argue that traditional accounts of vulnerability tends to list “the usual suspects”: those people in marginalised groups, e.g., those with mental health issues. Often the terms vulnerability, vulnerable people and vulnerable populations are linked to children, the elderly and those with mental health issues (Misztal, 2011). Luna and Vanderpoel (2013) also argue that targeting subpopulations labelled as vulnerable is nothing more than a simplified answer to a complex problem. Indeed, vulnerability is not limited to single dimensions.

Studies increasingly show that vulnerability is multi-dimensional, linked to a diverse range of individual and situational factors that can intersect (Radar et al., 2012; Luna, 2009). Rader et al. (2012) suggest two main forms of vulnerability: physical vulnerability and social vulnerability. Physical vulnerability refers to the various physical characteristics of a person ranging from gender through to age, and social vulnerability refers to social characteristics, ranging from race to socioeconomic status. Radar and Cossman (2011) also highlight the importance of health status (or more to the point, health disparity) as an additional physical vulnerable factor. Some of these characteristics are often the basis for vulnerable characteristics that are used to define vulnerable populations (e.g., age) and therefore, can be misleading. More recently, Levassuer and colleagues (2021, p. 1) found that “Vulnerability definitions mostly focused on people under conditions that increased their risk of harm because of individual physical factors, the environment, and their interaction”. Within a criminological setting, definitions of vulnerability appear to rest predominately on physical and social factors. The latter has been expanded to include more on social inequality. In 1981, Sparks argued that:

“Some persons, because of their attributes, usual behaviour, or their place in a social system, may be very vulnerable to crime, in that they are abnormally susceptible to it. This implies that they are less than normally capable of preventing such crimes against themselves” (Sparks, 1981, p. 773).

Indeed, Sparks (1981), in describing the various facets or ‘attributes’ of individuals, may have been one of the earliest researchers to consider vulnerability as a specific trait of victimisation.

The idea of social context features in further research regarding crime, anti-social behaviour, health, and vulnerability (Weisburd and White, 2019; Wood et al., 2014; Clarke, 2013; Williams, 1997). Social context refers to the various settings in which social interactions occur, which can include the social or physical environment (Gigerenzer, 1996; Cohen and Felson, 1979). Cutter and colleagues (2003) noted that social inequality was often a precursor to social vulnerability along with negative characteristics associated with specific environments. In this they referred to:

“Place inequalities - those characteristics of communities and the built environment, such as the level of urbanisation, growth rates, and economic vitality, that contribute to the social vulnerability of places” (Cutter et al., 2003, p. 243).

This resonates with Innes and Fielding’s (2002) research on ‘signal crimes’, i.e., criminal incidents that can disproportionately impact on individuals. The concept of ‘signal crimes’ builds on Wilson and Kelling’s (1982) widely discussed *Broken Windows* theory. Broken windows is a metaphor that signals a cycle of decline within a community that can lead to higher incidences of crime and disorder. Despite ‘broken windows’ theory being retrospectively questioned due to various other factors that may have influenced crime patterns (Harcourt, 2009; Harcourt and Ludwig, 2006) it did offer a new insight into community policing and the idea that certain ‘signals’ could be used as early identifiers of communities requiring attention (Innes, 2004; Innes and Fielding, 2002). The application of such research was useful for police forces looking to better understand local communities, improve community cohesion, improve community intelligence, and reduce the fear of crime. This understanding of ‘place’ has been the centre point of environmental criminologists

who have sought to understand the importance of the relationship between offending, victimisation, and place (Ratcliffe, 2019; Chainey and Ratcliffe, 2005; Eck et al., 2005; Brantingham and Brantingham, 1995; Cohen and Felson, 1979). Extending the research on environment factors Nyamathi (2007; 1998) noted that inequalities regarding the distribution of societal resources can also predispose people towards vulnerability and creates vulnerable populations. More recently, research has shown that crime hotspots are not just high concentrations of a disproportionate amount of crime, but also small areas of other social imbalances, particularly where there are adverse health outcomes including physical and mental health issues (Weisburd and White, 2019; Wood et al., 2014; Mclean and Marshall, 2010). This extends the idea of 'signal crimes' (Innes, 2004) directing attention to particular communities and invites researchers to explore the notion that these communities have disproportionate levels of vulnerability (Innes and Innes, 2013).

Based on their research of anti-social behaviour, Innes and Innes (2013) have suggested three areas that need to be considered to better understand a person's vulnerability in respect of victimisation and anti-social behaviour. They had been concerned that victims of anti-social behaviour related issues amounting to vulnerability were being missed by police forces. They concluded that there were three types of vulnerability, with the first two sharing a similarity with the research of Radar and Cossman (2011): personal vulnerability (e.g., the individual's personal attributes), situational vulnerability (e.g., the location of where the individual lives), and incidental vulnerability (e.g., factors relating to how the individual felt). Innes and Innes (2013) added that vulnerable victims of anti-social behaviour were disproportionately exposed to a combination of the three factors and often residing in areas of high socio-economic deprivation. They also noted that it was difficult to identify repeat victims and vulnerable victims from the police recorded data, with a strong chance of being missed from basic police research due to how the data was collected and stored. This will be explained in more detail in the data analysis chapters of this thesis (chapters 6-8).

A growing number of social dimensions can be associated with vulnerability. Some explained as "primary dimensions of age, culture, ethnicity, sexual and gender identities and physical and psychological abilities" (Bartkowiak-Théron and Asquith,

2012a, p. 11), refer to social dimensions, as well as physical and psychological abilities. Social vulnerability, including class and socio-economic status, also appears as a common topic in academic literature (Wood, J.D, 2020; Weisburd and White, 2019; Appleton, 1994). It is argued that placing people into 'vulnerability categories' can fail to recognise the wider social context of their potential vulnerability, such as specific marginalised groups, e.g., those who are homeless (Bartkowiak-Théron and Corbo Crehan, 2010). Luna (2009) argues there appears to be a growing list of subpopulations regarded as vulnerable, which does not help develop policies and practices in support of vulnerable people. Many commentators argue that vulnerability does not occur in silos (Asquith et al., 2016; Luna and Vanderpoel, 2013; Luna, 2009), and further understanding should be generated as to how these issues intersect with each other (Bartkowiak-Théron and Asquith, 2012b). Those who are truly vulnerable, including marginalised and hard to reach groups, often exhibit a range of vulnerabilities that intersect with each other (Bartkowiak-Théron and Asquith, 2012b; Brown, 2011; Misztal, 2011). For example, research shows that individuals who suffer adverse childhood experiences (Wager, 2015), are more likely to experience later physical and social vulnerabilities that have a detrimental impact on their health. Of course, the danger of this research is that vulnerability can be all encompassing and 'vulnerable people' becomes the new term for "disadvantaged members of society" (Bartkowiak-Théron and Asquith, 2012b, p. 43). As such, identifying vulnerability is only one aspect of the challenge facing researchers and police practitioners, the other side is how to respond to it.

One area that many scholars are starting to agree on is that vulnerability should not necessarily be defined by descriptors (Bartkowiak-Théron and Asquith, 2015; Luna and Vanderpoel, 2013; Misztal, 2011; Killias and Clerici, 2000) and that those who truly are vulnerable, those marginalised by society and hard to reach groups, have several vulnerabilities that interconnect (Levasseur et al., 2021; Fohring, 2018; Bartkowiak-Théron and Asquith, 2012a; Luna, 2009). Misztal (2011) notes that more than one form of vulnerability can apply to an individual. Vulnerability should be understood not simply by the physical / personal aspects but also in how these aspects of a person's character intersect with their environment, for example, economic status and where they live (Green, 2007). This is also the basis for Herring and Henderson's (2012) critique of diversity, which Bartkowiak-Théron and

Asquith (2015) have used in their discussions regarding vulnerability. Research has shown that individuals who have had difficulties early in life, reported as adverse childhood experiences (Boullier and Blair, 2018; Wager, 2015; Greenberg, 2001), are more likely to later experience physical and social vulnerabilities that have a detrimental impact on their wellbeing. Eck (2001, p. 252) once noted that some individuals in society suffer from a variety of conditions (e.g., mental health, poverty, victim of crime) that increases their risk of further victimisation and, thus, refers to them as “sitting ducks” in society. Therefore, those who are vulnerable are susceptible to further future harm.

Vulnerability and related terminology

Brown (2017) identifies several definitions that examine the term vulnerability through a variety of lenses, such as environmental and human sciences, philosophy, feminist theory and sociology (see Brown, 2017, p. 44 for a tabular breakdown). This heterogenous collection of definitions and terminology demonstrates the incredible effort by researchers placed on attempting to contextualise the term. However, what these various debates fail to do is to provide common ground from which to work in an operational setting for practitioners. Austerity in the UK propelled policing into rethinking their mission, and the challenge of addressing vulnerability was soon realised (Addidle and Liddle, 2021; Millie, 2014; Brown, 2012). Before vulnerability became more recognised as a significant term, risk and harm were the favoured concepts and terms used in policing.

Many discussions on vulnerability play around with key terms such as risk, threat, and harm, and these terms are common within policing, as well as other public sector agencies, such as public health (Herrington and Serbie, 2021; Bartkowiak-Théron and Asquith, 2017). Again, defining these terms have not been definitively addressed within policing and it can be argued that they have simply been used as part of the policing rhetoric when attempting to instil public confidence in the policing mission, especially in discussions about legitimacy regarding the strategic direction in police policy (McLean et al., 2020; Schermuly, 2019; Herbert, 2006). For example, Brown (2017, p. 41) argues that there is a lack of clarity around the term’s vulnerability and risk, with her noting that “while similarities between risk and vulnerability have received some attention... the concepts are often used

interchangeably, and differences have received little attention”. Previously, Misztal (2011) suggested that risk and vulnerability are two sides of the same coin. She further argues that when trying to understand vulnerability, one must also engage with “the concept of risk” (Misztal, 2011, p. 32). For Ericson and Haggerty (2002, p. 238) risk is the notion that “threats and dangers are recognised”. Whereas vulnerability is more associated with potential harm caused to someone (Asquith and Bartkowiak-Théron, 2021; Green, 2007).

It could be argued that in recent years there has been a growing attention to these terms, particularly from an academic perspective. However, from an operational perspective, these terms pervade many aspects of police work with little explanation and can obfuscate any meaningful discussion as sometimes they are used interchangeably (Bartkowiak-Théron and Asquith, 2012a)⁵. Therefore, the many academic discussions, as well as definitions, do not help provide a focus for policing on identifying who or what is vulnerable, or in using these many terms with consistency or with other agencies. In fact, the reverse is possibly true, in that it is more likely to confuse the policing landscape as opposed to making it clearer, particularly if other agencies are using these terms differently (Brown, 2017; Bartkowiak-Théron and Asquith, 2012a; Appleton, 1999).

The term *harm* was also prominent when exploring the literature for this thesis. Harm is often mentioned in relation to vulnerability, particularly within a policing context (Bartkowiak-Théron and Asquith, 2012a; Sparrow, 2008). Harm has been of particular interest in regard to assessing the impact of crime (i.e., the harm) and targeting resources to tackle those crimes that cause the most harm in the community. Sherman and colleagues (2016) developed the Cambridge Harm Index (CHI) as a ranking method for scoring the harm from crime. This has also been redeveloped as the Crime Severity Score (CSS) (Bangs, 2016). Simply put, not all crime is equal and not all crime has the same level of victimisation or community harm (Ashby, 2018). Bland and Ariel (2020, p. 63) argue that:

⁵ This will be discussed in more depth in chapter 5.

“[N]ot all crimes are the same and treating them as such skews analysis and interpretation of policing issues, leading to the misallocation of resources and false negative results in intervention evaluations”.

The use of a harm matrix has had a significant impact in policing internationally, ranging from New Zealand (Curtis-Ham and Walton, 2018) to Europe, including Denmark (Andersen and Mueller-Johnson, 2018) and Sweden (Kärrholm et al., 2020), and from America (Mitchell, 2019) to Australia (House and Neyroud, 2018). It has been argued that the use of a harm index can improve an understanding of community problems (Huey, 2016). However, this approach has a significant flaw for those interested in wider community concerns: it is only based on crime. The College of Policing (2015) established that crime accounts for 20% of calls for police service, so it is safe to project that the use of the CHI will only assess 20% of community issues, although recent research has explored the use of the CHI and the overlap between victims and offenders (Ashby, 2018; Sandall et al., 2018). This does not detract from the value of the CHI, for example, no one would argue that shoplifting has the same level of harm as that of sexual assault (Ratcliffe, 2019). So, in that regard, the use of a harm index is a positive step for assessing where policing should prioritise crime events, particularly those high-harm crimes that are more likely to be targeted towards vulnerable victims. Indeed, this could even be a useful tool in better understanding vulnerable victims of crime.

The key points so far have been that the variation in terminology and use of terms adds to the complexity of vulnerability and confuses frontline practitioners. Discussions about vulnerability as a concept and a term has been questioned by some (Green, 2007; Fawcett, 2009) and it has been described as “an elusive matter and taken for granted assumptions” (Brown, 2017, p. 3). For policing purposes this is not ideal. Policing is often reliant on clear parameters within which to operate (Davis and Bailey, 2018). Police practitioners and the police force, often rely on a set of commands and a hierarchal direction to focus their resources, which is based on the typical command-and-control structure that drives policing business (Davis and Bailey, 2017; Houghton et al., 2006). Unfortunately, this is not always appropriate, particularly when dealing with complex problems that require multi-disciplinary solutions (Herrington and Colvin, 2016). The ‘I say and you do’ (i.e.,

command and control) approach to managing situations becomes problematic, particularly when the police work with other agencies (Herrington and Serbie, 2021). Sparrow (2008, p. 3) argues that many agencies face similar “operational puzzles” and that to “discuss those puzzles, they merely have to learn each other’s vocabulary”. Clearly, language between public services is an issue and one that Sparrow discusses in depth (2008). At this point, defining vulnerability becomes even more clouded and it is suggested that terminology is an influencing factor within policing leadership and decision-making (Herrington and Serbie, 2021). There are a number of inter-related terms, all of which populate police policy and discussion, but fail to focus direction with any purpose or meaning. This chapter now moves to discuss further issues with vulnerability as a concept.

Problems with the concept of vulnerability

So far, this thesis has shown that the concept of vulnerability can be divisive which can impede operational support, particularly for frontline police practitioners. Wrigley (2015, p. 487) argues a case for eliminating the concept of vulnerability and treating vulnerability as little more than a ‘tag’ or ‘marker’ for cases that requires further scrutiny in research (this could also apply to policing). However, Green (2007) has suggested that the concept of vulnerability has rarely been explored in its own right and its meaning has mostly been considered in relation to fear of crime (Killias and Clerici, 2000). There has clearly been a growing body of research into vulnerability beyond that of which involves fear of crime. Being able to articulate and understand what vulnerability constitutes, is no easy task, and there has certainly been significant academic research in trying to unpick the nature of vulnerability. But this has led to a growing list of groups considered vulnerable.

There seems to be a growing number of categories linked to vulnerability through victimisation (Walklate, 2011; 2007) and diversity (Bartkowiak-Théron and Asquith, 2012a). Hurst (2008, p. 191) argues that “contradictory definitions can lead to confusion for those who are supposed to protect the vulnerable” and this has led to numerous categories (and social dimensions) being added under the umbrella of vulnerability. This growth has been noted as perhaps an organisational construct through changes in social policy and a growing emphasis by the public sector to tackle vulnerability and victimisation as merely servitude towards political interest

(Green, 2007). This is certainly the argument made by Bartkowiak-Théron and Asquith (2015) when discussing the ripple effect of the MacPherson inquiry in 1999, which has not necessarily provided the support required by those in the criminal justice system. Bartkowiak-Théron and Asquith (2015) note that since the publication of the MacPherson report in 1999:

“The policies and practices to emerge since the MacPherson report have taken race and cultural difference as a template for the development of an ever-increasing number of siloed responses to vulnerability in the policing process.” (Bartkowiak-Théron and Asquith, 2015, p. 89)

Whilst dealing with an expanding array of marginalised groups, the policing response has become constrained by the myriad of policies and protocols aimed at addressing a variety of attributes considered to be a category of vulnerability, e.g., drug users or the homeless (Bartkowiak-Théron and Asquith, 2015). To compound this, findings by Williams and colleagues (2009) found that cases of sexual and violent crime involving the most vulnerable individuals failed to progress through the criminal justice system. They added that the police need to better organise their work around dealing with vulnerability (Williams et al., 2009). This suggests that whilst on the one hand the police are pursuing an agenda of recognising numerous vulnerable traits, on the other, they are struggling to deal with them effectively, or at the very least, provide appropriate support. This may also come from placing individuals into specific groups rather than assessing individual need on a case-by-case basis, which would be a more appropriate response (Bartkowiak-Théron and Asquith, 2012b).

Vulnerability as a label whether it's wanted or unwanted

The grouping of individuals into vulnerable categories is not so straight forward and the label of vulnerability poses a range of problems (Brown, 2011). Hurst (2008) notes that there are too many groups considered as vulnerable with some, potentially, being inaccurately labelled. Regardless of the numerous vulnerability classifications or vulnerable population, the label of vulnerability has been noted as one of potential resistance. Those who are said to be vulnerable may, in fact, be resistant to the label (Brown, 2017). Some resist the term 'vulnerability' due to the

connotations it constructs regarding the inherent weakness of specific groups (Chakroborti and Garland, 2012), with such labelling generating stigma and having a negative effect (Noakes and Wincup, 2004). This may be due to those in vulnerable categories who do not wish to identify as such (Howes et al., 2017), but being labelled as such could lead to potential discrimination (Mackenzie et al., 2014). Mackenzie and colleagues (2014) add that by labelling everyone as equally vulnerable renders the concept to be a hollow exercise because there are varying degrees of vulnerability.

Initial attempts to identify those who are vulnerable has often been achieved through researching specific categories. These have included: minority communities (Bartkowiak-Théron and Asquith, 2015), those who suffer fear of crime (Radar et al., 2012), the poor (Lewis and Lewis, 2014), those suffering inadequate housing provision (Palmer et al., 2012), social vulnerability to environmental hazards (Cutter et al., 2006), factors relating to victimisation (Green, 2007), or even those affected by quality of life issues, such as anti-social behaviour (Innes and Innes, 2013). Indeed, some individuals who may belong to marginalised groups classed as vulnerable populations, may even reject the term vulnerability having developed coping mechanisms to overcome any adversity or learning to overcome or live with their vulnerability, such as sex workers (Hammond and Kingston, 2014). The use of categories has been of interest to police forces as it leads them to try and quantify vulnerability. But this is perhaps a dysfunctional response as rather than seeking to complete a growing number of categories they should focus on understanding what they are dealing with (Guilfoyle, 2013).

Defining vulnerability for operational policing

The term 'vulnerability' is rich and complex, and clearly a nebulous task (Brown, 2017). Yet, defining it for operational policing purposes has become its own topic of research. Cops and Pleysier (2011, p. 59), refer to vulnerability as "the perception of exposure to danger, a loss of control over the situation and a perceived inadequate capacity to resist the direct and indirect consequences of victimisation". Green (2007, p. 92) explains that vulnerability "is often used to express the level of risk posed to certain groups or individuals. The more vulnerable a person is, the more at risk they are of victimisation". Dealing with victimisation is clearly a major

responsibility for policing, and if police forces are to improve their response to vulnerable people, then there needs to be a clear emphasis on support to victims.

There has been no agreed definition of vulnerability that directs police activity, nor has there been consistency across the 43 police forces of England and Wales (HMICFRS, 2018a; HMICFRS, 2015). However, the terms, vulnerability, vulnerable people, and vulnerable populations, are being used on a much more regular basis (Asquith and Bartkowiak-Théron, 2021). Indeed, even the two key organisational bodies that influence all 43 police forces in England and Wales have different definitions. The College of Policing⁶ and HMICFRS⁷ define vulnerability differently, which, considering their influence on policing practice is somewhat a surprise. Below are the definitions offered by the College of Policing and HMICFRS:

“A person is vulnerable if, as a result of their situation or circumstances, they are unable to take care of or protect themselves or others from harm or exploitation.” (College of Policing, 2020b; 2019a).

“People less able to help themselves in case of an emergency, for example people with mobility problems, people with mental health difficulties, and children. Exact definitions of ‘vulnerable people’ vary across police forces and fire and rescue services.” (HMICFRS, 2018a).

The HMICFRS (2015) noted that definitions vary across police forces, which has been further compounded by the College of Policing looking to develop their own definition. Therefore, it is unsurprising that there is no consistency in how police forces define vulnerability (HMICFRS, 2015). At the time of writing, there has been no formal agreement between the HMICFRS and the College of Policing about the

⁶ The College of Policing was established 8 years ago to support police forces through 3 central functions: knowledge, education and standards. These functions help set a consistent code of ethics and professional standards for all police forces to adhere to, whilst also developing knowledge and guidance to support all police forces (College of Policing, 2021).

⁷ The HMICFRS works in the public interest to independently assess police forces and fire and rescue services. They report on the efficiency and effectiveness of police forces and conduct reviews that allow the public to compare different forces (HMICFRS, 2018b). It is the HMICFRS who assess the capability and capacity of each police force to function and to rate this ability. The College of Policing provide the support to ensure police forces can respond to the HMICFRS inspections.

use of a standard definition. As the HMICFRS do not promote any particular definition, the definition as promoted by the College of Policing, should perhaps be used as the baseline when discussing the topic of vulnerability. This is especially as the College of Policing are responsible for outlining police training and education. Ideally, this should be supported and promoted by the HMICFRS who can then review all forces from the same baseline. How the two bodies resolve this difference has yet to be answered, but it does start the discussion regarding a workable and agreed definition that can identify those to be targeted and provide the right guidance for frontline staff. It is argued that this thesis may nudge these discussions further along and provide an evidence base to support decision making at a policy level and reinforce the need for a singular definition for all police forces (Bartkowiak-Théron and Layton, 2012).

It is then somewhat surprising that police forces are individually graded by HMICFRS “on their effectiveness at protecting vulnerable people from harm” (HMICFRS 2015, p. 8). The way to do this remains ambiguous and subjective, and having a variety of definitions adds to the dilemma of consistent grading or even in identifying good practice. Whilst some working definitions are now in existence (Rogers and Coliandris, 2015), HMICFRS (2015) have noted that there is no accepted definition of vulnerability across the police forces of England and Wales, nor any specific guidance as to who merits intervention. However, despite this lack of clarity, police forces have been stressing the importance of protecting and safeguarding vulnerable people (Ford et al., 2020; Shorrock et al., 2019a; Innes and Innes, 2013; Bartkowiak-Théron and Layton, 2012).

Further confusion for police officers and police staff may arise from the Crown Prosecution Service (CPS) using a different approach to defining if someone is vulnerable, which is based around age, mental health and disability:

“Vulnerable or intimidated victims

1.10 You are eligible for enhanced entitlements under this Code as a vulnerable victim if:

(a) you are under 18 years of age at the time of the offence, or

(b) the quality of your evidence is likely to be affected because:

i) you suffer from mental disorder within the meaning of the Mental Health Act 1983;

ii) you otherwise have a significant impairment of intelligence and social functioning; or

iii) you have a physical disability or are suffering from a physical disorder.”

(Ministry of Justice, 2015, p. 14)⁸.

In regard to vulnerable witnesses the CPS notes in guidance for Special Measures (CPS, 2021) that:

“While some disabilities are obvious, some are hidden. Witnesses may also have a combination of disabilities. They may not wish to disclose the fact that they have a disability during initial and subsequent needs assessments. Further prosecutors should be aware that the need for special measures may widely vary from one individual to another, for example different witnesses on the autistic spectrum may have very different needs from each other.” (CPS, 2021, p. 8).

The challenge of defining vulnerability in academia is replicated across policing and criminal justice services. This clearly magnifies the operational problems.

Implications for policing with no agreed definition

The implications of having multiple or no agreed definition means that different approaches in responding to vulnerability have been adopted by police forces and different vulnerable groups may be included (or excluded) from receipt of ‘special

⁸ See also Ministry of Justice, 2021.

measures'. Special measures refer to specialist support being offered to vulnerable victims of crime. It could be argued that all victims of crime are vulnerable (Fineman, 2010). However, the Ministry of Justice Code of Practice (2015, p. 13) states that "all victims of a criminal offence are entitled to an assessment by the police to identify any needs or support required, including whether and to what extent they may benefit from Special Measures." It could be argued that different definitions are appropriate depending upon which needs are being addressed by each specific agency (e.g., mental health (Wood and Watson, 2017; Leese and Russell, 2017)), so long as there are no conflicts in definitions or outcomes for vulnerable people when agencies are then working together towards safeguarding and supporting people (Koivunen et al., 2018; Dehaghani, 2016).

Defining vulnerability for practitioners is inherently difficult because there are diverse opinions and no national definition in law, policy or across organisations that work with vulnerable groups (Bartkowiak-Théron and Asquith, 2015; Rogers and Coliandris, 2015; Innes and Innes, 2013). Whilst the police governing bodies agree that all forces should include dealing with vulnerability at the forefront of their mission, they, and the police themselves, do not have a consensus about a definition (HMICFRS, 2015). This can then have a significant impact on when and how police forces respond to calls for service involving vulnerable people (Asquith and Bartkowiak-Théron, 2021). The importance of definitions is clear for how police forces investigate incidents and deal with vulnerable people, such as vulnerable witnesses (Cooper et al., 2018). It is important to the prevention and detection of crime to define parameters for investigations so that officers are aware of what they are dealing with, particularly when dealing with other agencies locally and nationally, e.g., National Crime Agency. It is also important for applying national strategies such as the National Policing Crime Prevention Strategy, which notes in the outcomes (as outcome 2: reduced victimisation) to "tackle drivers and vulnerabilities associated with victimisation" (NPCC, 2015, p. 1). Therefore, defining vulnerability in a policing context was a significant theme that requires further explanation, and this emphasises the need for research in this area.

As 'vulnerability' is such a strong emerging theme in research and policing, although inherent difficulties exist in composing a definition for it, the absence of an agreed

definition generates three specific problems for police practitioners (Bartkowiak-Théron and Asquith, 2015). First, UK police agencies are now measured through the PEEL (Police Efficiency, Effectiveness and Legitimacy)⁹ inspection framework on their approach to tackle vulnerability. As such, there should be common agreement between all police forces, the College of Policing and the HMICFRS on what an appropriate standard should be. Second, police forces require some consistency in responding to vulnerable people if they are to establish expertise and good practice. Finally, if the concept remains fluid there is a danger that the police will suffer mission creep, overlapping into services that may be more appropriately delivered by another institution (Albrecht, 2021; Kirby, 2020; 2013). These issues require the need for further definitional and operational clarity for practitioners and how police resources are managed.

Vulnerable groups, police performance and measurements

New Public Management, introduced in the 1990s, was a policy shift for police forces and brought with it a mix of business style management and performance monitoring (Mason et al., 2014; Leischman et al., 2000). Originally the responsibility and oversight of monitoring of police performance fell to the HMICFRS and the Police Authority, with the latter being replaced by the Police and Crime Commissioner (PCC) in 2012. This brought a new politicised element to police management: the PCC being an elected figure, and therefore, the public attention regarding police performance became a political motivator for how PCCs influenced the local policing agenda (Cooper, 2018; Murphy et al., 2017). Research has shown that transparency around police performance data can have a significant impact on the public's trust of the police (Mason et al., 2014; Reiner, 2010). Of course, naturally police forces (and PCCs) are keen to measure and collect data for performance metrics so they can develop insights (Shane, 2010).

The use of performance data has not always been straight forward and has been shown to generate dysfunctional behaviour within organisations due to the target

⁹ For more detail, please refer to <https://www.justiceinspectorates.gov.uk/hmicfrs/peel-assessments/what-is-peel/>.

driven nature of a performance agenda (de Maillard and Savage, 2018; Guilfoyle, 2016). It is more problematic when new elements of policing are introduced that are difficult to measure, such as vulnerability. Cutter et al. (2006) pointed out that understanding the various aspects, particularly social aspects, of vulnerability are problematic as there is difficulty in quantifying them. If it is difficult to quantify vulnerability (which is exacerbated through inconsistent definitions) then how can police forces measure it? Green (2007, p. 94) provides a possible answer that may frustrate police organisations:

“Measuring vulnerability is therefore a complicated business. Even using risk and harm provides nothing more than a conceptual framework for thinking about what vulnerability is. Even if vulnerability could be ordered and measured, such research would probably still fall into the positivist trap of ignoring the social processes that both label people as victims and define their appropriate responses to harm caused”.

Indeed, Green (2006) notes the complexity of vulnerability and suggests that simply seeking to measure it detracts from understanding it. However, police forces (and the HMICFRS) have traditionally measured what they do and what they deal with (Rogerson, 1995). This obsession with measuring has slowly altered over time as police organisations have looked to address community concerns through problem solving (Moore and Braga, 2003) and through improved use of police performance (Guilfoyle, 2016; 2013). This evolution needs to consider how policing monitors its management and handling of vulnerable populations, as trying to simply measure vulnerability is a crude yard stick that fails to recognise the social context of vulnerability. It could be argued that being able to measure vulnerability in a policing context is an unsophisticated method of being able to identify it.

Defining vulnerability: a summary

The term ‘vulnerability’ has been discussed in a variety of disciplines across academic literature as the topic has blossomed in the last decade. Dealing with vulnerable people has also been recognised as a key feature of the policing mission across the globe. Bartkowiak-Théron and Asquith (2012) provided the first comprehensive collection of research themes on policing vulnerability in their book,

Policing Vulnerability. This helped provide a platform for further research and understanding of how police forces interact with vulnerable people. Regardless of the various nuances of differing definitions, placing this topic in the spotlight for an organisation that deals with vulnerability on a daily basis is a welcome one. Indeed, in a policing context, dealing with vulnerability has become a significant part of strategy and policy. Stemming from austerity in the UK, targeting vulnerability has been the catalyst to target those in crisis for a couple of reasons: to reduce demand on policing and to help support those with significant needs before they reached crisis point (Asquith and Bartkowiak-Théron, 2021). The debate around defining vulnerability has certainly helped increase the research interest into the topic and help develop an evidence base to influence police activity.

Ultimately, defining vulnerability so far seems to have done little to influence front line police responders, but this is improving. However, the focus on tackling vulnerability, regardless of how it is defined, is most welcome. This section now considers how the police identify vulnerability and considers certain attributes of vulnerability that have been discussed in literature and are variables amongst recorded police data. This chapter now moves on to discuss in more detail how the police identify vulnerability.

Identifying vulnerability

So far, it has been established that it is difficult to define vulnerability and police forces have had no consistency in defining it. This begs the question how police forces then identify vulnerability if there is confusion around the concept? However, setting aside the debates about an inconsistency in defining vulnerability, police forces have started to progress ideas about who are vulnerable with a view to identify them in local communities (Asquith et al., 2017; Menkes and Bendelow, 2014; Williams et al., 2009). This section discusses how police forces attempt to identify vulnerability. It takes a step on from defining vulnerability to assess if any definitions influence the identification of vulnerability. By examining the approaches police forces use to identify vulnerability may help clarify their translation of vulnerability. In addition, how the police identify vulnerability will form the basis for the quantitative research of this thesis and critically assess how the police might identify vulnerability to how they do identify vulnerability in practice, which starts with police training (Asquith and Bartkowiak-Théron, 2021; Bartkowiak-Théron and Layton, 2012).

How the police identify vulnerability is largely determined by training and experience, but this can be inconsistent. Asquith and colleagues (2016, p. 161) noted that recognising vulnerability can vary across police force areas and that “correct identification of this vulnerability is wholly dependent upon practitioners’ willingness and capacity to assess victims’ and offenders’ individual pathology or social membership”. Further to this, Bartkowiak-Théron and Layton (2012) note that educating the police about vulnerability can be challenging against existing stereotypes of the people that the police encounter. This can also be problematic as vulnerability is not necessarily a visible trait and therefore adds to the difficulties in identifying it (Menchelli, 2021). Therefore, if police officers are not able to assess the vulnerabilities of those individuals that they encounter, the officers will have to rely on existing police practices and policy to influence how they deal with the encounter rather than rely on any specialised support. It must also be noted that the policy shift towards prioritising vulnerability is a relatively recent one (Millie, 2014). This means police forces are still adjusting to the new focus and change in police organisations is not often an easy or straightforward one, especially for frontline staff (White and

Robinson, 2014; Toch, 2008). This thesis will add to this debate and aims to provide an evidence base that will inform existing and future policy decisions.

Types of vulnerability, key determinants and aggravating factors

One consideration that this thesis looks to explore is that police organisations have identified vulnerability based on the data they already collect in general. Being 'data-led' is a traditional approach adopted by police forces in attempting to understand the world around them (Guilfoyle, 2012). But first this thesis will explore some of the attributes and distinguishing features of vulnerability that have appeared in the literature. It will then assess if any of these features have been or could be already recorded by police agencies to identify vulnerability or vulnerable people.

Fineman (2010) argued that vulnerability should be detached from subgroups as conceptually, vulnerability is inherent in all humans. However, vulnerability is often siloed into groups or group characteristics or a "community of traits" (Bartkowiak-Théron and Corbo Crehan, 2010, p. 11). These can then be categorised under specific themes, e.g., physical vulnerability. Radar and Cossman (2011) have offered two key vulnerable groups that share related characteristics: physical and social categories (as discussed earlier). These themes, as an umbrella term of vulnerability, has also included 'incidental' vulnerability (Ferrarese, 2016; Innes and Innes, 2013) and 'environmental' vulnerability (Smith and Tortensson, 1997; Sparks, 1981). Within these themes are lists of sub-categories or attributes of vulnerability, which are described by health agencies as key determinants, e.g., education, childhood development, age (Christmas and Srivastava, 2019; King, 2018; Hurst, 2008). These will be briefly discussed and their validity for inclusion as a vulnerable characteristic will be examined. It must be noted that these attributes are not exclusive or exhaustive. Further, this thesis recognises that social divisions often require sensitivity when being discussed, particularly in relation to vulnerability (Brown et al., 2017; Brown, 2017; Anthias, 2012). For policing purposes, some of the attributes discussed can be found within recorded police (and other agency) data and may be used to support discussions regarding vulnerability. It must be noted that this is based on what might be recorded by the police and not about the contentious nature of wider discussions regarding social divisions.

Attributes of physical or personal vulnerability

Physical vulnerability refers to personal attributes and may include gender, age, health status, sexuality, physical and psychological abilities. Gender and age are cited as key determinants in vulnerability discussions. Gender is a consistent factor for vulnerability, particularly in fear of crime literature (Cops and Pleysier, 2010; Smith and Torstensson, 1997), with age being equally discussed, particularly the elderly and the young (Radar et al., 2012).

Vulnerability and age

Age is often one of the initial determinants considered within discussions on vulnerability. The elderly (Means, 2007; Grundy, 2006) and the young (Arora et al., 2015) are often believed to be the two most vulnerable of groups (Bartkowiak-Théron and Asquith, 2012a). This is well documented in health studies that address age as a key determinant. Marmot (2020; 2005) and Marmot and Allen (2014) noted that there can be several points of heightened vulnerability along a person's life cycle, which includes heightened vulnerabilities at different ages. At each end of the age spectrum there may be issues that result in crises and calls for police assistance, for example, the elderly suffering dementia and young people testing boundaries through risky behaviours.

Levasseur et al. (2021) highlight health inequity for being a significant factor for vulnerability in the elderly. The World Health Organisation (WHO) recognises aging as a "triumph and a challenge" (2002, p. 6). Supported by the Marmot principles (Marmot and Allen, 2014), the WHO note that countries require appropriate health services and support to ensure that aging populations can maintain independence and not drop into a "disability threshold" (2002, p. 14) that reduces personal resilience and increases state dependency. Fineman's (2010) arguments support this: she argues that vulnerable people have an interdependency with state care, but agencies should be concerned with reducing that interdependency and improving individual resilience. This is certainly the case for police agencies. Kirby (2020) noted that the elderly were a key group of repeat callers for police assistance and the majority of cases were not in relation to crime. If the police are looking to support vulnerable people and reduce the demand on resources, they will need to work

cooperatively with other agencies to improve resilience amongst individuals and communities.

In relation to the other end of the age spectrum, Brown (2017) has examined vulnerability and young people and notes the complex nature of vulnerability. This is not just in relation to vulnerability per se, but also in relation to service provision as policy and practice often does not take account of the variation and challenge that those deemed vulnerable may provide. She also notes that services would “perceive the more ‘difficult’ young people as less vulnerable and more in control of (and culpable for) their actions” (2017, p. 5). Further to this, Arora and colleagues (2015) noted that young people and their involvement in risky behaviours, e.g., alcohol use, was a factor that made them susceptible towards being vulnerable. A study of alcohol use and antisocial behaviour in young people looked at the co-occurrence of alcohol and disruptive behaviour among young people (Harradine et al., 2004). The research suggests the problem is not that drinking in young people inevitably leads to antisocial behaviour, but rather it is young people who already have a violent or antisocial tendency who are more likely to carry out anti-social acts when drinking. It found that it is was not the levels of underage drinking, but early signs of antisocial behaviour that best predicted future alcohol-related trouble and continued alcohol use by young people. Further to this, a review of ASB by Camden Council found that those perceived to be committing ASB “have complex and multi-faceted problems in their lives” (London Borough of Camden, 2007), this is combined with social exclusion, deprivation, drug and alcohol problems and poor parenting (Harradine et al., 2004).

These underlying factors have also been identified in adverse childhood experiences (ACE) research, which has been noted as being a significant identifier towards vulnerability (Bateson et al., 2020; Bellis et al., 2014; Anda et al., 2006). Child sexual abuse, a significant ACE factor, has been linked to a variety of health problems in adolescence and adulthood, leading to vulnerabilities in later life, including risky sexual behaviour and sexually transmitted diseases (STDs) (Greenberg, 2001). Research around sexual behaviour has shown a strong graded relationship between ACEs and a self-reported history of STDs among adults (Hillis et al., 2000), thus demonstrating the wider impact on health services. Those who have been victim of

child abuse in the home are more likely to be at risk from future sexual exploitation (Wager, 2012), which should be an indicator for police and social care in identifying vulnerable groups. Yet, despite the wealth of research in ACEs, there have been some contrasting views. Aihio et al. (2017) examined the differences between recorded crimes with potential vulnerability and self-reported vulnerability by crime victims. The researchers concluded “that mental health issues and the type of crime experienced may be good criteria for predicting vulnerability, whereas age may not be” (Aihio et al., 2017, p. 389). There has been much discussion on ACEs and the issues with ACEs are paralleled with that of vulnerability: those who have suffered harm are reactively coming to the attention of the police. This highlights the difficult nature of policing and questions their ability to solely provide appropriate interventions.

Vulnerability and gender

Similar to age, gender is an attribute that is often discussed in relation to vulnerability (Asquith et al., 2017). As discussed earlier in this chapter, Christie (1986) posited that gender (specifically being female) was a key factor in being regarded as ‘the ideal victim’, which could be argued as having influenced many discussions regarding policing of vulnerable victims. Aliverti (2020, p. 1121) adds that “vulnerability is loaded with associations of fragility, weakness, non-agency and femininity”. Indeed, Bartkowiak-Théron and Asquith (2012a, p. 288) have also noted that “gender and sexually diverse communities are now commonly recognised within the framework of vulnerability”. Aihio and colleagues (2017) found discrepancies between those recorded as vulnerable victims of crime to those who self-reported as being vulnerable. They found that females were more likely to self-report as being vulnerable (2017). Research examining fear of crime has often explored gender differences and concluded that females are more likely to feel vulnerable and have a heightened sense of fear of crime (Cops and Pleysier, 2011; Jackson, 2009; Killias and Clerici, 2000).

Vulnerability and psychological issues

Mental health issues are perhaps the most common (and obvious) of the vulnerable traits, despite not necessarily being visible or easy to identify (Mclean and Marshall,

2010). Mental health is often discussed in a policing context too. It has been argued that there is an increasing responsibility for the police in dealing with mental health issues within the community (Shapiro et al., 2015; Wells and Schafer, 2006). The initial concern for frontline policing is identifying potential mental health issues (Frederick et al., 2018). Due to the nature of policing, it is highly evident that they will encounter individuals who are experiencing mental health crises. This does not mean that police responders will be able to diagnose the issue, but they may need to identify potential mental health concerns to manage the event effectively. This has been supported by the introduction (in some force areas) with Crisis Intervention Teams (CIT) in the United States (Watson and Fulambarker, 2012). This is a collaborative multi-agency response that enables specially trained officers to identify those with mental health needs and transport them to secure units. It is not without its challenges, e.g., inconsistent training and a lack of medical facilities (Compton et al., 2010), but it is recognised as a step towards improving officer knowledge and skills (Bonfire et al., 2014) and identifying mental health needs (Watson and Fulambarker, 2012).

Dealing with mental health is not just an issue for frontline policing. Mental health, as a significant vulnerability, can be magnified during an individual's transition through the criminal justice process. The complexity of dealing with mental health during this journey is evident for both victims and for offenders too (Dehaghani and Newman, 2017; Asquith, Bartkowiak-Théron and Roberts, 2016). This highlights a further issue for police investigations about the need to identify vulnerability throughout all police interactions, not just in response to calls for service. Therefore, training around identifying vulnerability needs to cover numerous police officer roles.

Indeed, mental health is a key topic within policing studies and the College of Policing ensure that related issues take centre stage for trainee police officers through pedagogical indicative content within Higher Education programmes that deliver the 3 strands of the PEQF (Police Education Qualification Framework) in the UK (Wood, D.A., 2020; Williams et al., 2019). This is an important step for Police forces that maintain the notion of supporting vulnerable people and this programme of study must incorporate vulnerability and health research to improve how police agencies can identify vulnerability (Asquith and Bartkowiak-Théron, 2021; Christmas

and Srivastava, 2019). This will mean developing the critical thinking skills of new (and existing) police officers so they can go beyond traditional policing approaches to enhance partnership activity and work with health agencies to correctly identify and manage vulnerability, which has been made abundantly clear in recent research (Asquith and Bartkowiak-Théron, 2021; Weisburd and White, 2019; Wood, J.D., 2020; Wood et al., 2014). Critical thinking skills for police officers will help them identify potential vulnerability that is not readily visible. Aihio et al. (2016) noted that nearly 60% of those who self-reported vulnerability had a physical or mental disability, and that those with a mental health issue were more likely to report as being vulnerable. An issue for police officers is identifying mental health issues as they can range from anxiety to psychotic episodes.

Attributes of social and familial vulnerability

Social vulnerability refers to the next layer of vulnerability (Luna, 2009) to be discussed in this section. The social layer considered here includes factors that can have a direct influence on an individual, e.g., race (Radar and Cossman, 2011), social class (Fineman, 2011), socio-economic status (Cutter et al., 2006; Sparks, 1981) and familial relationship (Mack et al., 2007). Similar to physical factors, there are clear categories here that are sometimes recorded in police data sets and therefore have potential for identifying this type of vulnerability, based on this layer.

Ethnicity and race

Radar and colleagues (2012) noted that, along with socio-economic status, some individuals can feel more vulnerable due to their ethnic or racial characteristics. This can have a negative impact on the individual's wellbeing, with Radar and colleagues noting that "minorities and lower-class individuals believe their vulnerable status increases their potential for becoming a crime victim" (2012, p. 134). This can heighten feelings of fear and vulnerability in local communities. Further, Iganski (2001) noted that victims of crimes or antisocial behaviour based on the victim's personal, racial or social characteristics can have a longer lasting impact than is the case for victims of crime generally. This highlights potentially vulnerable groups in communities who can be more easily identified. Police recorded data contains codes for ethnic breakdown. If the police wish to identify vulnerable groups based on

ethnicity and race, this is a relatively easy process and could be used for community safety and crime prevention programmes that target vulnerable groups.

Vulnerability, social class and socio-economic status

Demographic attributes can play a significant part in the ascription of vulnerability. This includes where someone lives, income, employment, and poverty. It has been noted by health authorities that “deprivation is a key determinant of population level risk of mental illness” (Public Health England, 2014, p. 7). Research has consistently shown that socio-economic status is a factor in vulnerability, and this can increase the risk of being a victim of crime, which in turn can have a negative impact on the health of the victim (Schuller, 2013). Deprivation is commonly used as an explanatory variable in studies of victimization (White and Haines, 2001) and policing studies (Bryant and Bryant, 2020). Some people within the more deprived areas of communities are more vulnerable to repeat victimisation and this increases their fear of crime and has a negative impact on the health. Eck (2001) refers to these people as ‘sitting ducks’ and it is these people that the police should be prioritising if they are to increase resilience amongst vulnerable individuals and families. Identifying these areas should play an important part of the police response to vulnerability and should form a key element of any multi-agency activity. Ultimately the aim should be to improve resilience and improve community safety, which could have a positive impact on calls for service for a number of public services.

Familial relationships and links to vulnerability

Maternal attachment has been identified as an important determinant of delinquent behaviour amongst young people (Mack et al., 2007). Whilst young people and their behaviour has already been discussed above (see Vulnerability and age), research by Mack et al. (2007) has shown that the strength of attachment within families is a significant factor in determining the impact on delinquency. This can clearly influence risky behaviours and a young person’s vulnerability. Further, Sparks (1981) has proposed that some individuals may be vulnerable due to their domestic circumstances. He adds that relationships from which an individual cannot easily withdraw can render that person vulnerable, e.g., in a domestic abuse or childhood neglect setting (Saxton et al., 2020; Purvin, 2007). However, this will not be an easy

factor to identify for a police force (unless they have become involved already) but it is an identifiable factor that may be recorded or identified by a supporting agency, e.g., social care (Shorrocks et al., 2019a; Bartkowiak-Théron and Asquith, 2012b). This promotes the need for improved relationships between key agencies in identifying factors that can help identify vulnerability. Personal and familial conditions are also affected by wider environmental and situational factors too. Bronfenbrenner (1986) has argued that external influences, such as social networks, can affect family and personal dynamics. This supports Luna's (2009) notion of vulnerability as a layered system: one that is relational and considers an individual's life experiences, as opposed to being a member of a labelled category. Understanding the impact of environmental and situational factors that impact on the personal or physical attributes will now be discussed.

Attributes of environmental and situational vulnerability

The make-up of a local area can play an integral part in community cohesion and feelings of vulnerability. Neighbourhood disorder, social disorganisation and living in areas of high crime can produce negative effects on local residents (Smith and Torstensson, 1997; Sparks, 1981). The idea of 'place' features heavily in environmental criminology research (Brantingham and Brantingham, 1995). This has been the basis for hotspots policing – the targeting of disproportionately high-crime areas – and has been regarded as one of the most innovative advances in modern policing (Weisburd and Braga, 2019). However, hotspots policing does not just involve high levels of crime: recent research has evidenced that high levels of crime are related to a host of other social problems. Weisburd and White (2019) and Weisburd and colleagues (2018) found that health issues were more likely to be found in hotspot or high crime areas. Weisburd and White discuss the “concentrated disadvantage” found in some localities (2019, p. 143) and that “communities with high crime rates have also been found to be communities with high levels of social disadvantage, and adverse health outcomes” (2019, p. 152). Schuller (2013) had previously posited that crime is a question of health and that the two disciplines (criminology and health studies) were intrinsically linked. Therefore, the use of hotspots policing may indeed be a method of identifying other vulnerable communities. This will be of particular importance when aggregating other data sets,

such as social-economic status, which can be used to identify communities that feel vulnerable through high levels of fear of crime. More recently, Levasseur and colleagues (2021) have argued that targeting vulnerability must emphasise the importance of situational context as this increases the opportunities for interventions, which is also a key part of the College of Policing (2020b) definition of vulnerability. Levasseur et al. (2021, p. 8) “propose to rename the concept situations of vulnerability, which can be defined as a set of circumstances in which one or more individuals experience, at a specific moment in time, one or multiple physiological, psychological, socioeconomic, or social difficulties that may interact to increase their risk of being harmed or having coping challenges that have a negative impact on their life.” This demonstrates the influence that situational and social context can have on vulnerability, but also means that police forces are able to consider existing means of targeting problems to also to have a positive impact on vulnerability, such as hotspot policing and high crime areas (Weisburd et al., 2018; Trickett et al., 1992).

Incidental vulnerability: temporary vs permanent

In addition to the factors discussed above, there are other transient considerations that can impact on levels of vulnerability. These might be even temporary or incidental factors where there is fear of heightened harm (Innes and Innes, 2013). Additionally, alcohol consumption can lead to temporary vulnerability or increase a person’s risky behaviours that subsequently heightens their potential vulnerable status. Further to this, an injury can also increase levels of vulnerability, such as a broken leg or loss of hearing. This also includes heightened factors when victim feels threatened or targeted or even socially isolated.

Vulnerability and crime

Being a victim of crime means that there is some level of vulnerability (Brown and Gordon, 2022; Graham-Kevan et al., 2015; Green, 2007). It could be argued that all those who contact the police for support have been vulnerable in some way. This begs the question aren’t all people who contact the police vulnerable? If this is the case, then how do the police identify and prioritise the most vulnerable? Being a victim of crime also means that a person has been exposed to a harmful event

(Walklate, 2007). Being the victim of crime can lead to consequential vulnerability, i.e., suffering post traumatic effects of the crime (Graham-Kevan et al., 2015). Further, offenders may also suffer a similar consequential vulnerability by being subject to the criminal justice process. Recently, research has noted that the police use of traditional crime control approaches to crime can have the potential to have a negative impact by criminalising vulnerable people (Wood, J.D., 2020). So what can the police learn from criminology and victim studies about vulnerability?

Identifying vulnerability through victimology

Policing has also been predominantly focussed on the offender through enforcement (Skalansky, 2013), detection (Ratcliffe, 2018) and prevention (Leishman et al., 2000; Clarke, 2008), and occasionally “keeping people safe, either from crime or other social harms” (Ratcliffe, 2019, p. 1). Traditionally, the police understanding of victims has perhaps not been at the forefront of their mission. Likewise, criminology and criminological research has mostly centred on the role of crime, the criminal and criminal justice (Liebling et al., 2017). Policing has used a lot of criminological research to develop new approaches to understanding crime and crime control. There have been numerous iterations of policing models that have targeted offenders from the National Intelligence Model (NCPE, 2005a) through to private policing (Skalansky, 2000). Whatever the model, the key aspect has been to reduce crime and enforce the law. It is only by focussing on vulnerability that policing has taken a new step towards examining the role of the victim. More recently police services have been directing victims through to appropriate victim and support services (Oswald et al., 2018).

Victimology is the study of victims and could be classed as a recent sub-theme of criminology (Fattah in Shoham et al., 2010). Victimology has helped shift criminological research away from focussing on offenders and causes of crime and has helped improve knowledge on harm and vulnerabilities of victims. Victimization surveys, in particular the Crime Survey of England and Wales (CSEW), have helped direct an emphasis towards victims for the last 40 years. The CSEW and police recorded crime are the two main sets of data that examine crime trends. During this time victimology has grown into its own discipline that has helped scholars understand the victim as a sole area for study as opposed to being simply linked to a

crime. The victim does not necessarily have to be the victim of a crime but someone who has been harmed in some way (Walklate in Corteen et al., 2016). Indeed, it is also important to note that not all victims are the same, nor is their experience. Whilst police officers may categorise victims by the crime in which they have been victimised, the victim's experience may be very different.

Christie (1986) attempted to typify the 'ideal victim' based on a series of factors. In his seminal article Christie cites two examples of victims: an old lady who has been helping a friend and then assaulted, and a young man in a bar who is assaulted. Christie argues that the old woman is more an 'ideal victim' than the young man. He argues for 5 attributes: weakness of victim, victim conducting a respectable task, victim could no way be blamed for being the victim, the offender was "big and bad" and a stranger (1986, p. 12). Here the first point is the interesting one. Weakness denotes a frailty or vulnerability which is not assigned to the young man. However, Christie fails to consider situational context of vulnerability. It is at this point that 'risk' should be considered a key element of vulnerability. The young man in the bar scenario would be classed as a high-risk target in a high-risk situation (based on crime analysis for violent crime in an NTE (night-time economy) setting). Therefore, he may be classed as particularly vulnerable, even if the vulnerability is temporary, especially if he is also under the influence of alcohol, an additional attribute to being vulnerable. Also noted by Verdun-Jones and Rossiter (2010) is the psychological impact of being victimised: "victims of crime are diverse and their responses to criminal victimisation vary wildly as a result" (2010, p. 611). Victims may have different responses to suffering and the suffering could also be determined by a variety of factors and can ignite internal vulnerabilities (Iganski, 2001). Those with existing vulnerabilities are those that also suffer when attempting to access support in the CJS and MH services. Therefore, research supports the notion that police forces should consider victims of crime as vulnerable, regardless of the attributes they hold. Police forces may also want to consider that vulnerability is multi-dimensional and therefore they may want to consider a scale of vulnerability as proposed by Levasseur and colleagues (2021).

Victimology and repeat victimisation

Victimology and the study of how and why victims suffer from harm has shown that some victims suffer more than others (Farrell and Pease, 2017; 2008; 2001; Walklate, 2007). This may not necessarily be about victims who suffer the same crime more than once, but those that suffer repeatedly from a disproportionate number of crimes, anti-social behaviour incidents or harmful events. For example, Farrell (1992) showed that 70% of all incidents in the CSEW were reported by 14% of respondents. He added that “victimisation should not be studied without fully accounting for multiple victimisation” (Farrell, 1992, p. 85). Pease (1998) and Farrell and Pease (2008) have added that repeat victimisation is not simply about the same victim being the repeat of the same crime, but they may suffer ‘cross-type repeats’, meaning they suffer from a range of crimes or harms. Repeat victimisation can occur in many settings, such as “spatial repeat” where the same place is repeatedly targeted, e.g., a person’s home (Farrell and Pease, 2008, p. 122). More recently Pease et al. (2018) argued that police interest in repeat victimisation had waned despite remaining of scholarly interest. As attention towards dealing with vulnerability grows, it is perhaps of concern that addressing repeat victimisation has dropped from the police radar. The problem for police forces is in identifying repeat victimisation, particularly cross-type repeats (different crime types). Repeat victimisation has been noted as difficult to progress due to how crime is counted and that it is often understated (Tseloni and Pease in Shoham, et al., 2010; Farrell and Pease, 2007). Further to this, police IT systems are often not set up or equipped to readily identify repeat victims as each notifiable offence is recorded separately and in isolation to other recorded cases. To identify repeat victims from police IT systems separate research and analysis had to be undertaken, and yet repeat victimisation should be prioritised as being vulnerable and at risk of further harm (Farrell and Pease, 2007; Farrell, 1992).

Using victim data to identify vulnerability

It seems clear from available literature that the police already collect data on vulnerable groups: victims of crime and anti-social behaviour. Regardless of other traits, these groups contact the police for assistance due a significant event or crisis. Therefore, police forces should be making the most of available data so they can

start to identify vulnerable people through the data they collect. Farrell and Pease (2008) noted that some of the highest victimisation rates were for domestic violence, sexual assaults, abuse, racial attacks and even bullying. They also added that repeat victimisation rates are higher in high crime areas (2008). Research has shown that those who repeatedly suffer are more likely to become socially isolated and develop physical and mental health issues (Farrell and Pease, 2017). Police forces do not need to venture further into the vulnerability agenda when they already collect enough data on victims, i.e., a significant vulnerable group that the police deal with daily. Or perhaps recorded victim data should be used more effectively in assessing scales of vulnerability, e.g., identify specific needs of vulnerable victims (Levasseur et al., 2021). With the readily available data it should be possible to layer other attributes (as discussed earlier in this chapter) to start to prioritise vulnerable people in a policing context. For example, Aihio et al. (2006) argue that victims of crime with mental health issues was a good criterion for identifying vulnerability per se. Further, Innes and Innes (2003) were able to show that those who called the police with ASB issues were likely to be disproportionately exposed to a range of personal, situational and incidental vulnerabilities, but more worryingly was the issue that they were often missed in the data capture. The research added that police data systems needed to be able to link across several different internal systems if the police wanted to learn more about vulnerability and harm (Innes and Innes, 2013). Therefore, it would be more beneficial to get the most from existing databases and recorded data to help identify vulnerable people.

To further support this identification of (and response to) vulnerable people, the police have ready-made models in place to improve their understanding of problems in local communities (Clarke and Eck, 2003). Examining victims is a key element of the problem-analysis triangle (Eck and Spelman, 1987). The problem-analysis triangle (often referred to as the PAT triangle, (Ratcliffe, 2019)) is based on routine activity theory as a means of understanding crime patterns (Felson and Boba, 2010). PAT is used as a means of analysing various attributes of victims, offenders, and locations to identify root causes of problems and how the police might respond (Clarke and Eck, 2003). It is a key element of problem-oriented policing (POP), and this presents an ideal opportunity to better understand police data regarding vulnerability in context with local communities' issues and harms (Goldstein, 2018;

1979). Additionally, it could help identify both personal vulnerable traits as well as social and environmental attributes too. Further to this, the police should consider repeat victimisation as a priority vulnerable group. Repeat victims and those repeatedly victimised are often on the agenda for other agencies and this chapter now considers vulnerability from a health care perspective and what this might mean for policing.

Vulnerability in health care and public health research

So far, this chapter demonstrated the growing research that evidences the links between vulnerable people, crime, and health. Crime is not just about breaking the law and is associated with social disorganisation, low social capital, deprivation, and health inequalities. There are many links between health and crime with both issues costing millions to public services and the wider community. The same social and environmental factors that predict geographic variation in crime rates may also be relevant for explaining community variations in health and wellbeing (Kawachi et al., 1999). In which case, this opens up the possibility of identifying vulnerable groups before they hit the radar of the police and health providers. Working together would enhance intelligence development and, through effective partnership working, should reduce demand on a range of public services (Barton and Valero-Silva, 2013). Therefore, this provides a strong evidence base for police forces to work more closely with health and social service providers, including drawing from health research.

There is a body of health research that shows how the term vulnerability can obfuscate the landscape for health care practitioners (King, 2018; Appleton, 1999; 1994) and this chapter has already shown this to be the case for frontline police officers. Early research by Appleton (1994) was interested in the perceptions of vulnerability by health visitors in cases of child protection. This qualitative research showed that families move in and out of vulnerability over time, which suggested that some vulnerabilities are transient, and this can be influenced by a number of social and environmental factors. This has the possibility of making it difficult for practitioners to assess individual and familial vulnerabilities and therefore the use of a definition would have been supportive to help identify vulnerabilities. However, Williams (1997) argued that health visitors did not follow any predefined definition of

vulnerability, partly because there was not much of a definition, but rather, they would determine vulnerability based on the socio-economic status of where the client lived. Almost two decades later, research was still showing that health visitors had differing opinions as to what vulnerability was (King, 2018). Health research has consistently shown that the perceptions of the health visitors have a significant impact on which clients were deemed vulnerable. It is not clear if socio-economic status alone influences police perceptions of vulnerability.

However, factors that influence health and wellbeing include demography and socio-economic determinants which have also been shown as attributes in policing vulnerability research (Asquith and Bartkowiak-Théron, 2021; Bartkowiak-Théron and Asquith, 2012b). Existing health inequalities are clearly an indicator of unmet need that varies across the county as do the perspectives and confidence of local communities. Wood (Wood, J.D., 2020) argues that all police agencies need to work with public health to ensure that vulnerable people are directed into appropriate services.

Identifying vulnerability: A Summary

The identification of vulnerability is an uneven landscape for policing. The literature suggests that identifying vulnerability within a policing context is often based on the experiences and training of officers rather than the use of recorded police data, but that data is not necessarily collected for specifically identifying vulnerability. The use of existing police recorded data is perhaps not the best method of identifying vulnerability. There are a number of issues regarding police data that have previously been discussed, which demonstrates how police data may not be the most appropriate method for directing police activity (Huey et al., 2021; Guilfoyle, 2013). Brown and colleagues (2017, p. 498) noted that the “vagueness and malleability of vulnerability can result in a problematic lack of analytical clarity which in turn can have important implications for interventions and practices”. Therefore, improved analysis across data systems and improved understanding around vulnerability as layers, as opposed to single descriptors, would improve identification of vulnerable people within ‘the system’. Being ‘hypothesis-led’ (i.e., looking for the right data to answer research questions) as opposed to being ‘data-led’ (i.e., using only the data at hand to answer research questions) will offer improved direction,

even if this requires changes in data structure, storage and or retrieval. However, one plus point of trying to identify vulnerability, policing has engaged more with other public services and agencies, particularly health services in attempting to reach those with the greatest needs. This is a positive and inclusive step for policing and one that should help towards reducing long-term demand through dealing with chronic problems (Ratcliffe, 2019) and root causes (Goldstein, 1979).

Responding to vulnerability

The first two sections of this chapter have explored how vulnerability is defined and identified in a policing context. This chapter will now examine the literature on how the police respond to vulnerability. To help put this in context, this section will start by examining the key responsibilities of the police.

The policing mission, in more recent years, has transformed to a point where it openly embraces the challenge of tackling vulnerability and complexity. This has been due to necessity as opposed to choice, due to austerity and increasing demands on police resources (Millie, 2014). The nature of demand facing the police has been changing. Whilst many categories of recorded crime have been falling, police work is becoming more complex due to more involvement in mental health cases (Puntis et al., 2018) and increased calls surrounding public safety and welfare (Higgins and Hales, 2016). As a visible and accessible 24-hour service, the police are generally viewed as the agency of last resort receiving a diversity of calls and this is not a recent development (Kirby, 2013). In 1973 Punch and Naylor found that 41% of calls for service were in relation to enforcement, which meant that 59% of calls were for other matters, e.g., public nuisance or missing persons. Goldstein (1977, p. 24) made reference to research that collectively noted that a “high percentage of police time is spent on other than criminal matters, and they thus call into question the value of viewing the police primarily as a part of the criminal justice system”. Goldstein also noted that policing involved dealing with a range of social care issues. Fast forward a few decades and the percentage of calls related to crime was shown to be approximately 20% by HMICFRS (2012) and has been further reduced in 2015 to 17% by College of Policing (2015). Interestingly, the number of emergency 999 calls has also decreased by 23% in more recent years since 2006/07 when they were at their peak. Boulton, et al. (2017, p. 71) note that “much

of what the police actually do is not directly measured in crime figures". Whilst crime figures have generally been decreasing along with emergency calls to the police, demand has not fallen (Boulton et al., 2017). The College of Policing previously argued that whilst 999 calls have reduced, there have been increases in the percentage of demand to respond to incidents involving vulnerable people (College of Policing, 2015). This means the other 80% of calls made to the police are for a wide list of public safety and welfare incidents (Higgins and Hales, 2016) and further highlights that work undertaken by the police service is not always in relation to crime (Boulton et al., 2017). Brodeur (2010) noted that most police time is actually spent on matters that are non-crime related (e.g., anti-social behaviour and social care issues), and this demonstrates the need for policing to answer to the challenge of responding to complex problems, of which vulnerability is a significant part.

Policing vulnerability as a new paradigm in police response

It was in the late 1970s that Goldstein first drew attention to the legitimacy of the policing mission and whether they were effectively dealing with what matters (1979). Bittner (1974, p. 17) had previously argued that "the police are the best known but least understood" of institutions which can complicate matters as forces look to redesign themselves in light of new challenges. Goldstein (1979) was perhaps a bit more focussed in his analysis of police organisations and asserted that policing was confused and focussed on the wrong things. They were constantly worried about how they were doing things, that the end results were often forgotten (Goldstein, 1990; 1979). He argued that the police should be less worried about their organisation and concentrate on tackling the root cause of problems, issues, and harms, in which case the end results would sort themselves out: "The police have been particularly susceptible to the "means over ends" syndrome, placing more emphasis in their improvement efforts on organization and operating methods than on the substantive outcome of their work." (1979, p. 236). It is easy to draw parallels with Goldstein's problem-oriented policing and the current issues surrounding vulnerability. With regards vulnerability and vulnerable people, police forces have been focussed on the *means* (i.e., how they operate) and examining how they can respond to complex need, rather than exploring what they want to achieve. It has

become part of the rhetoric of the police mission which has echoed in the PEEL¹⁰ assessment framework (HMICFRS, 2015), and thus, has influenced organisational behaviour in setting up new teams and processes to tackle vulnerability as opposed to defining what they are aiming to achieve (Goldstein, 1990). In the UK this has been fuelled, in part, by austerity measures between 2008 and 2018, that has meant that police forces have had to shrink. Their response has been to explore new ways of reducing harm in communities, but their attention has been what they do, as opposed why they do it and what the end goal is.

To respond to the increasing demand surrounding public welfare and related issues, tackling vulnerability through early intervention has emerged as a key theme in contemporary policing (Bartkowiak-Théron and Asquith, 2012a). The first national iteration of this approach was with the Troubled Families programme, of which the police have been a key agency. This approach focusses on specific needs within problem families with the aim of breaking generational cycles of health, worklessness, crime and anti-social behaviour issues (Hayden and Jenkins, 2014). Taking aside the disputed term 'problem families' (Crossley, 2018), the ethos of the programme is not too dissimilar from the aims of the JSNA (joint strategic needs assessment) framework of Public Health that is a requirement under the Local Government and Public Involvement in Health Act 2007 (Tomlinson et al., 2013; Ellins and Glasby, 2011). This approach is led by public health and social care services but includes a range of responsible and supporting authorities (Ellins and Glasby, 2011; Harding and Kane, 2011). The use of the JSNA determines how policy directs public service practice in tackling the needs of individuals, groups, and communities (Skinner et al., 2013). This has resulted in many agencies coming together to improve health outcomes for communities, yet this approach has fallen short of reaching police agencies who are not as engaged in this process.

The Troubled Families programme and JSNA approach to public health and wellbeing, both being Government backed initiatives, highlight the complex need of individuals and families. This highlights the simplicity of dealing with complexity: it

¹⁰ PEEL (Policing Efficiency Effectiveness and Legitimacy) is a 3-strand framework used for assessing the capability and capacity of police forces in England and Wales.

cannot be tackled by one agency in isolation. Sparrow (2008) noted that dealing with harm is like trying to unpick a knot. If you pull at the knot, it will tighten and become difficult to unpick it. This would be a traditional policing response as they would see the end result as trying to remove the knot. However, Sparrow (2008) argues that to be successful you need to slowly pick at the various strands, identify where those strands belong and then you are more likely to achieve success. This is a good analogy of the policing response to vulnerability, and it fits with the idea that the police can be consumed with the end result and therefore can miss the intricate detail of what is required to provide sustainable solutions. Vulnerability is a delicate and complex problem to resolve, and it could take considerable effort to unpick the various facets. The chances are there will be several issues, or strands, at play and each will require a different response or agency support.

Criminal justice and special measures as a response to vulnerability

Supporting vulnerable people is not a new phenomenon in policing. Police forces have been improving their responses to supporting victims of crime and managing offenders through the criminal justice system, as well as managing offenders upon release (Hadfield et al., 2021; Cram, 2018). In both instances, as victims or offenders, any deemed vulnerable are signposted towards specialist support (e.g., criminal justice system as a vulnerable person) or directed through to victim support services. However, defendants are not able to access services through Special Measures. The CPS note that:

“Special measures are a series of provisions that help vulnerable and intimidated witnesses give their best evidence in court and help to relieve some of the stress associated with giving evidence. Special measures apply to prosecution and defence witnesses, but not to the defendant and are subject to the discretion of the court.” (CPS, 2021, p. 3).

The aim of Special Measures is to ensure that the quality of evidence given by a witness is not diminished due to any level of vulnerability (CPS, 2021; Ministry of Justice, 2020). It must be pointed out that this approach to supporting vulnerable people is reactive in nature, i.e., this has occurred after they have had a significant interaction involving the police. It could be argued that this does not support any

response in preventing harm to vulnerable people and therefore will not impact on reducing long-term demand. Asquith and Bartkowiak-Théron (2016) argue that supporting vulnerable people has been operationalised (to some degree) in policy and some practices, but only as an exception despite vulnerability being ubiquitous throughout the criminal justice process for both victims and offenders. The introduction of special measures emphasises a recognition that vulnerability can impact on victims and witnesses and that there are measures in place to support them.

Using police data to proactively respond to vulnerability

Empirically, the best place to start to examine the police response to calls for service is in police recorded data. May (2011) points towards two key issues that arise from using police data: Firstly, there is what is described as discretionary procedures that refer to the decisions by victims/witnesses whether to report to the police as well as the police decision to record the incident. The second issue is around institutional practices, which refers to the offences that are affected by the police service and governmental policies, what is recorded and how it is categorised, e.g., using Home Office Crime Classifications (see chapter 4). These two issues must be considered when dealing with police statistics and they should not be taken at face value, as they do not necessarily give a true account of societal issues (Hale et al., 2013). A third issue not covered by May's research is that of underreporting. In answer to this Sparks (1981; Sparks et al., 1977) used the victimisation survey to show that crimes were underreported and suggests that victimisation surveys provide a better understanding of crime, which has been supported by more recent research (Buil-Gil et al., 2021). However, despite these concerns, police data are still used to assess an understanding of demands on the police. Also, rather than bemoaning poor data quality, police forces should surely make the most of the data they have. (Stanko, 2008). Following on from research by Punch and Naylor (1973) that showed calls for service not just about crime, research has shown that by examining police data, poverty, and family issues are important ecological variables for understanding the distribution of crime rates among neighbourhoods (Warner and Pierce, 1993). There remains a lot of value in the data collected by the police, the key issues lie in how

this data is harnessed and used to support policing and multiagency activity. This thesis will explore this data and highlight how it can influence police activity.

Responding to complex problems through multi-agency partnerships

Policing responses to vulnerability need to be tailored to the outcomes they wish to support as opposed to the data they collect. Rather than being data-led, which focusses them on the means of tackling problems (Goldstein, 1990; 1979), police forces should be considering the outcomes they wish to achieve. Menichelli (2021, p. 699) has argued that:

“[A]dopting a perspective centred on vulnerability should lead to policies that are developed to meet the needs of vulnerable people – whoever they may be – so as to make them less afraid of crime, less likely to become victims of crime, and more likely to be treated fairly by the police”.

If the police are to become adept at identifying and prioritising vulnerability the challenge is how they work with other agencies to respond to the needs of vulnerable people more efficiently. Commentators agree that vulnerability should be tackled in a multi-disciplinary and multi-agency way, for instance, Wood (Wood, J.D., 2020, p. 20) argues that:

“Issues of public health are inseparable from the functions of policing. It is hard to conceive of a healthy population that is not an orderly society and free from victimization, harm, and trauma.”

Bartkowiak-Théron and Asquith (2016) had earlier argued that although criminology and health studies have diverged conceptually at a strategic level, when health and police professionals work together it is generally to safeguard individuals on an operational level. They argue that there needs to be improved engagement in strategic collaboration between public services to develop preventative measures, policy or procedures when dealing with vulnerability (van Dijk and Crofts, 2017; Bartkowiak-Théron and Asquith, 2016). The diversity, complexity and cross disciplinary nature of vulnerability certainly points to needing a wider collaborative approach. Although multi-agency initiatives are diverse, the majority are based upon

three common principles: information sharing; joint decision-making; and coordinated intervention (Home Office, 2013). Unfortunately, there is considerable evidence to show multi-agency engagement suffers from implementation failure (Kirby, 2013). Paterson and Best (2015) argue that conflicting agency priorities often leads to confusion, with police officers becoming embroiled in competing policies. Concerns are also voiced in relation to the weaknesses in police training due to the negative effects of persistent stereotypes (Bartkowiak-Théron and Asquith, 2012b), and police profiling (Cooper, 2015). Caution is also raised concerning the impracticality of training the police in all areas of social care, as well as pushing officers into a labyrinth of protocols and policies (Bartkowiak-Théron and Asquith, 2012b).

The complexity of multi-agency working is evident in relation to sexual crime and mental health crisis, for example, ensuring there is correct service provision available for those in need (Harris and Hodges, 2019; Darlington et al., 2004). There appears to be a consensus in the literature that police, criminal justice and other partner agencies need to take time to understand vulnerability to deal with the challenges of dealing with complex needs more effectively, rather than merely reacting to its symptoms (Herrington and Serbie; 2020; Bartkowiak-Théron and Asquith, 2012b; Salmon, 2004). Aside from brokering the development of personal resilience, others have highlighted the importance of tackling the root causes of vulnerability so communities can be equipped to cope with future issues (Lewis and Lewis, 2014). This is because personal (or physical) vulnerability can be exacerbated through social conditions (e.g., social and environmental vulnerability) (Innes and Innes, 2013).

Further, structural or systematic concerns have also been voiced in terms of vulnerability (Atkinson et al, 2005). The rise of vulnerable people being the centre of policy and practice in the public sector risks marginalising those considered vulnerable (Brown, 2017). This further supports earlier criticisms about tackling inequality and vulnerability by Bartkowiak-Théron and Corbo Crehan (2012). Williams et al. (2009) found that vulnerable victims of sexual and violent crime have often failed to progress through the criminal justice system. Similarly, concerns about generating unintended consequences have also been made when highlighting the

negative ramifications emanating from the MacPherson inquiry in 1999. As Bartkowiak-Théron and Asquith (2015, p. 89), point out,

“[T]he policies and practices to emerge since the MacPherson report have taken race and cultural difference as a template for the development of an ever-increasing number of siloed responses to vulnerability in the policing process.”

This is perhaps an issue of vulnerability being ‘vogue’ or as Brown (2017) would suggest in the opening chapter of *Vulnerability and Young people*, “the vulnerable zeitgeist” (2017, pp. 1-26). Brown (2017, p. 4) notes that “vulnerability appears to be something of a conceptual zeitgeist or ‘spirit of the time’ in contemporary social policy; a notion that is intellectually fashionable, reflecting and influencing welfare and disciplinary processes in a range of ways”. Indeed, within policing there tends to be shifts within strategic vision. Policy and practice often trends depending upon political demands or external demands (Brown, 2012). Austerity has played a significant part in focussing police attention, and it is perhaps no surprise that vulnerability has been at the heart of the policing agenda for the best part of 2010-2019. As the police attempt to reduce demand (another key topic on the police radar (Christmas & Srivastava, 2019; White and Weisburd, 2018; HMICFRS, 2015)), there has been some effort in preventative work aimed at tackling ‘frequent high-flyers’, i.e., those individuals that are constantly reappearing for attention or support (Van Dijk et al., 2019; Day et al., 2016) across the public sector. The Troubled Families programme is perhaps the most influential of these programmes, and one of which, drew particular attention from the police. This is in part due to one of the criteria for being targeted by the Troubled Families programme: the initial cohort of those eligible to be taken on had to meet at least two of the three criteria within a family setting:

- Involved in crime and or anti-social behaviour,
- High level of school absence,
- Out of work.

Families that met at least two of the criteria were then selected by public services through a ‘lead agency’ (Kirby, 2020; Bate and Bellis, 2018; Fletcher et al., 2012)

who would then work with the family to reduce offending, increase school attendance, and support the return to work. Incentives for the agencies were financial, which influenced those families that received 'special attention'. Whilst the term 'vulnerable' was not attached to the programme, it was an underlying theme.

Developing the policing response to vulnerability

The police have a long association with dealing with matters that are not crime related. Bittner (1974, p. 18) noted that the police "may be required to do the work of thief-catchers and of nurses, depending on the occasion". This involves police officers being adept at numerous tasks and possessing knowledge beyond that of the law. Walsh and Mason (2018) have noted that families are becoming more diverse and complex, and this can add to the dynamic situation encountered by police, which in turn requires continual training and learning. The College of Policing (2018) have attempted to improve policing knowledge with a systematic review of vulnerability. This report perhaps confuses the landscape more than it offers any direction for how police officers might respond to vulnerability, despite this the report claims to "highlight many issues that police officers and staff should be aware of during initial encounters" with vulnerable people (College of Policing, 2018, p. 4). The review offers little direction for police officers and is vague regarding vulnerability and the use of vulnerable indicators. This is perhaps due to the methods employed being skewed towards a limited number of crime areas¹¹ only. This is disappointing when existing literature clearly evidences the ubiquity of vulnerability across all areas of criminal justice, social care, and public health: all areas that impact on policing. Paradoxically, the review does recognise that "many people suffer from multiple adversities, personal and situational, which could have a cumulative effect or interact to increase their personal risk of harm" (College of Policing, 2018, p. 52). Unfortunately, this is not explored in any depth and offers no solution for a police response other than to accept that dealing with vulnerability is complex. The concern here is that the review should be supporting the growing evidence-base to provide a consistent policing response to dealing with vulnerable

¹¹ CSE (Child Sexual Exploitation), CSA (Child Sexual Abuse), domestic abuse, hate crime, mental health crises, extremism, radicalisation, bullying, harm from youth violence and gang involvement.

people. This could have been the opportunity for the College of Policing to support their mandate in the PEQF programme¹² to develop critical thinking and a knowledgebase of vulnerability for a new generation of police officer. Unfortunately, this feels like an opportunity missed.

A convergence of disciplines: exploring the concept of a multi-disciplinary response to vulnerability

So far, this thesis has discussed vulnerability from three perspectives in relation to its impact on policing. An emerging theme from this chapter has been the multi-disciplinary nature of vulnerability in both academic research and policing. Despite the financial framework in which the Troubled Families programme operated (Crossley, 2018), the ethos of the project makes sense from a social and policy perspective (Lambert and Crossley, 2017) and is a responsible approach from the public sector in supporting ‘wicked problems’ (Hayden and Jenkins, 2014): the philosophy being to break generational cycles of inherited problems within families. Whilst early help initiatives are not new to the public sector (e.g., Communities that Care (CTC) (Hawkins and Catalano, 1992)), there is a growing emphasis on developing early help initiatives such as the Troubled Families programme. As the public sector continued to shrink amid year-on-year cuts between 2008 and 2018, there has been a growing appetite, based on the Marmot principles (The Marmot Review, 2010), to reduce long-term demand on public services. This has been through targeting the vulnerabilities of families and individuals, thus stopping them from reaching crisis point and requiring specialist, and expensive support. It is this specialist support that requires policing to have a handle on what is available and how they can direct those with vulnerabilities (visible or invisible) to the right services, and in some cases helping divert them out of the criminal justice system, where appropriate (Oswald et al., 2018).

On a practical level Schuller (2013) noted there was a link, but also a disparity in service provision between crime and health and propositioned that there should be a

¹² The College of Policing licence and direct education for new police constables through the PEQF programme. This is discussed earlier in this chapter, under section Vulnerability and psychological issues – refer to the section ‘identifying vulnerability’ in the literature review.

convergence of health disciplines and that of criminal justice and community safety. Meanwhile, Akers and Lanier (2008) have also argued for a convergence between these disciplines stating that members of public health and criminal justice often work with the same marginalised populations (e.g., people at high risk of drug use or with significant health issues) and therefore should work more closely as disciplines. The literature clearly demonstrates that there is a gap between reducing reoffending strategies (Hadfield et al., 2021) and explicitly understanding the health needs of those in the criminal justice system.

Tackling vulnerability: a schism in policing

It is clear that police forces are keen to adopt new approaches and improve how they manage vulnerability. As part of these approaches police forces need to be mindful of how they are perceived by the public and the very vulnerable groups they seek to work with. Various illegal police behaviours and scandals have rocked the foundation and legitimacy of policing over time, and these have all had adverse impacts on the very communities the police seek to serve (Jackson et al., 2017). For example, in 1984 the Police and Criminal Evidence Act was brought in to support the rights of individuals and regulate the investigation of crime against a backdrop of police corruption and poor practice (Cape and Young, 2008). More recently the impact of the murder of Sarah Everard and the Casey review has a significant impact on policing as a whole (Casey, 2023; Lowerson, 2022). The murder of George Floyd in America and the subsequent Black Lives Matter movement, reignited memories of the Stephen Lawrence murder in the UK (Foster et al., 2005). These significant high-profile events have presented serious challenges police legitimacy policing and impacted on calls for service (Brantingham et al., 2022). Unfortunately, these are just some of the high-profile cases to impact on policing which seriously damage attempts by the police in their response to tackle vulnerability, particularly in hard-to-reach communities. As such, police forces need to consider engagement strategies with local communities that will rebuild trust. Unfortunately, this may take some considerable time.

Responding to vulnerability: a summary

Sparrow (2018; 2008) argues that there needs to be a disaggregation of complex problems in order to develop tailor made interventions. This is what Goldstein discussed in his seminal work on problem-oriented policing (1979). Whilst Goldstein did not articulate the complexity of the problems that policing face today, and context would be a key part of that discussion, many aspects of what Goldstein discussed still hold true. Perhaps Goldstein's biggest argument to improve policing was to rethink the means over ends approach (1990; 1979). As the police concentrated on what they were doing (i.e., the means) they forgot about the organisational goals and therefore lost sight of their primary mission. In some ways policing is not too different now as in Goldstein's era. Sparrow (2008) argues that vulnerability is metaphorically like a knot. He continues, that responding to complex problems require those involved in the response to slowly untie the knot and work with the different threads (i.e., agencies). Once the structure of the knot is understood, a tailor-made solution can be developed. The issue here is one of continually returning to discussions of reactive policing vs proactive policing. One thing both scholars work argues for is the police need to be more proactive, especially if they are to achieve the main aims of the policing mission. By tackling this 'new' problem proactively they can ease future demand. Strategically this makes sense but is alien to policing that traditionally has tended to focus on operational matters or the 'here and now'. Bartkowiak-Théron and Asquith (2016) note that police can operate excellently at an operational or tactical level but often struggle when developing strategic goals and matching them to operational delivery. This is not too different to what Goldstein argued in the late 1970s: perhaps policing has not changed that much in 40 years.

Chapter summary

In summary, the concept of vulnerability is an emerging and significant area of police demand. However, transforming this concept into operational practice is difficult to navigate, which has been largely influenced by issues of defining vulnerability. However, those issues are not confined to policing, as shown in this chapter and it could be argued that maybe a definition is not actually needed (Wrigley and Dawson, 2016). Especially if vulnerability is ubiquitous within policing events. It has been suggested that every interaction with the police is due to some form of vulnerability

(Asquith and Bartkowiak-Théron, 2017), which raises the question as to who are vulnerable and whether vulnerability is the norm or the exception? Clearly, this leads to who is identified as being vulnerable.

Identifying vulnerability in policing is mostly determined by training (through policy) and experience (operational practice). There are many traits and attributes that can be used as measures towards identifying vulnerability, but this can miss those non-visible traits. Additionally, the police are not qualified to assess all manner of vulnerabilities, e.g., mental health. This can lead to police officers being asked to become a 'jack of all trades' that places an unrealistic expectation on who and how they might identify vulnerable people. Bartkowiak-Théron and Asquith (2012b) suggest that frontline officers do not always make the judgement about who is vulnerable and should be trained in knowing when and where to direct potential vulnerable people. Therefore, the police response is not always about what the police do to support vulnerable people, but about how the police work with other agencies to address the needs of vulnerable people. This research aims to define and categorise high intensive users of public resources, define vulnerability and determine the most effective approach of providing services to them.

What the current research in this thesis demonstrates is that criminal and anti-social behaviour is the symptom of deeper root causes that often stems from families with significant health issues. There is clearly an array of vulnerabilities that increase the risks for people. But what do these vulnerabilities tell us about the individual: does the vulnerability increase the risk of criminal behaviour or is it a key determinant towards being a victim? A lot of the research shows vulnerabilities are issues for social care, education, and public health and all of them could increase the risks towards criminal behaviour and or victimisation. These issues are little to do with the police service as the police function is traditionally one of enforcement. However, are other agencies exploiting the police as they are the primary 24/7 service? Therefore, firstly, should the police be concerned with the concept of vulnerability, and secondly can they afford to be concerned with it?

Limitations of previous research

The concept of vulnerability is at the forefront of academic literature. This has included many debates regarding the various subpopulations and marginalised groups that warrant a label of vulnerability, whether it is wanted or not. Some of the limitations within existing research is that wider research maintains the idea that specific groups are vulnerable, although this is starting to reduce. Luna (2009) moved away from these ideas and has perhaps best described the nature of vulnerability in that it is more a series of layers, as opposed a group of categories. This also includes ideas of non-visible vulnerability and the interactions between various individual needs that can exacerbate vulnerability. The basis of literature regarding vulnerability tends to be from health and medical disciplines rather than social sciences. Appleton (1994) nudged this along with research into how health visitors identified vulnerability, which explored stereotypes around socio-economic status. It also opened up the idea that vulnerability is not necessarily an inherent characteristic of someone, but it can be a perceived one. There is evidence in the literature of this based on where vulnerable people are identified in the criminal justice process: special measures and victim services are only available for victims of crime and yet offenders are not considered part of the vulnerability equation.

The initial limitations in research methods of existing research are around the dearth of quantitative study. There are some excellent qualitative studies that explore vulnerable groups in detail, for example Brown's study of vulnerability and young people (Brown, 2017). Additionally, Asquith and Bartkowiak-Théron (2021) - and the same pair again with Bartkowiak-Théron and Asquith (2012a), and with Roberts (Asquith, Bartkowiak-Théron and Roberts, 2016) – have led globally on researching vulnerability within a policing context. However, there remains a gap in quantitative research around policing and vulnerability. This presents difficulties in comparing findings from research, particularly as much of the topic has been consumed with the concept of vulnerability and whether it is one that adds a benefit or a distraction from understanding it. It has been clear that terminology is floating around the epicentre of these conceptual debates but there has been no direct link between the notion of vulnerability and the notion of need, apart from perhaps, health literature. However, it is posited that this must be explored from a policing context, especially if police

forces want to work in partnership with other agencies, such as health, to better understand (identify) and target those with specific needs (vulnerabilities).

Thesis Aims

This current chapter has reviewed the concept of vulnerability in a policing context from three different perspectives: how the police define vulnerability, how the police might identify vulnerability and how the police respond to it. As has been emphasised throughout this chapter, there is a growing interest in researching and discussing vulnerability (e.g., Asquith and Bartkowiak-Théron, 2021; Brown, 2017; Fineman, 2010). This chapter provides the conceptual backdrop for the research question at the centre of this research: how do the police, define, identify, and respond to vulnerability?

The police service has evolved considerably over the last few decades, more so in recent years and responding to crime is only a fraction of what they do. In contemporary society they deliver, and often lead, on a wide variety of services and projects to support vulnerable people, which can be difficult to identify. Research demonstrates that vulnerable people can consume a significant level of public resources, coupled with high costs. This research aims to define and categorise high-intensive users of public resources, define vulnerability and determine the most effective approach of providing services to them.

The primary purpose of this thesis is to explore how the police identify and define vulnerability and how this shapes their ability when responding to situations involving vulnerable people. A focus group of existing frontline practitioners was conducted to gather knowledge and evidence on how the police currently undertake the three elements of the research question for this thesis. The findings from this exercise were used to explore the three sets of secondary data from a sample police force (as described in chapter 5).

This thesis proposes to add to existing literature and provide an evidence-base that will be used to direct police policy, training, and practice. It will also be used to support multi-agency working and knowledge sharing.

Chapter 3: Methodology

Aims of chapter

The purpose of this thesis is to investigate how the police define, identify, and respond to vulnerability. As already demonstrated in the previous chapter, defining vulnerability is challenging as it is an amorphous term that is often taken for granted (Stanford, 2012), with assumptions made about what or who is at risk (Bartkowiak-Théron and Asquith, 2012b). The application of an ambiguous definition within a policing context could potentially have a negative impact on the identification of those regarded as vulnerable (Bartkowiak-Théron and Asquith, 2015). But are the police identifying vulnerability or simply recording what they consider to be vulnerability? It is essential that the police are able to identify those individuals who are most in need as this will influence how the police subsequently act in order to support those individuals. This means that to understand issues regarding vulnerability, information about their needs is important to consider and should be recorded by the police to support decision-making and how they respond. Studies exploring vulnerability in a policing context have tended to focus on physical attributes, for example, gender or health (e.g., Bartkowiak-Théron and Asquith, 2012a; Radar and Cossman, 2011) and not so much on situational context of the event involving vulnerability, but this has been shown to be a significant influencing factor in cases where vulnerability has been present (Bracken-Roche, et al., 2017; Fineman, 2010; Luna, 2009). Therefore, exploring what the police record regarding vulnerability will be important in building a picture of how they might interpret definitions of vulnerability, along with organisational policies and practices, to protect and safeguard vulnerable people from harm.

This chapter will detail the rationale for the research design used in this thesis and how it will be used to answer the research question of how the police define, identify and respond to vulnerability. The chapter will start with a discussion of the mixed methods approach adopted in this thesis. It will outline the two different approaches adopted, qualitative and quantitative research methods, as a means of methodological triangulation to understand how the police define, identify and respond to vulnerability (Bekhet and Zauszniewski, 2012; Fielding, 2012; Spicer,

2012). The chapter will then move on to outline and discuss the data collection and analytical methods utilised, including data cleaning and coding (Matthews and Ross, 2010). It will also highlight limitations with the methods used and available data, before closing with a summary of key points of considerations regarding the research design and methodology.

Research design: A mixed methods approach

A mixed methods approach (or “combined methods research”, Spicer, 2012, p. 479) was followed in this study. This used two methods: one was a qualitative tool collecting data from a focus group that involved police practitioners from a UK police force; the second was analysis of secondary data collected from the same UK police force. The mixed methods approach was adopted as a means of ‘triangulating’ qualitative and quantitative data (Bekhet and Zauszniewski, 2012). Heale and Forbes (2013) note that triangulation is the use of more than one approach to exploring a research question by examining a situation from several perspectives. Being able to triangulate the two research methods was viewed as the most appropriate approach to answer the research question as it allowed for cross-checking results and for exploring consistency in findings from both methods and against available literature (Spicer, 2012; Fielding, 2012; Doyle et al., 2009). In relation to this study, triangulation has been useful in reviewing, synthesising and interpreting qualitative data (such as primary data: discussed below under the section ‘research method 1’) and the quantitative data that has been used: incident data, recorded crime and ‘protecting vulnerable people’ referral data (secondary data¹³). In addition, this approach has been used to reduce potential bias from the focus group with police practitioners when assessing their knowledge, experience and understanding of vulnerability (Smith and Noble, 2014; Albrecht et al., 1993). Based on grounded theory, potential themes about vulnerability, generated from the focus group data, were explored in the quantitative data (Seale, 2012a), i.e., being

¹³ Secondary data is data that has already been collected and recorded, usually for other purposes, but can be used for further analysis (Hagan, 1993).

able to identify if the recorded data was able to assist police practitioners in their understanding of vulnerability.

Recorded police data is collected for administrative purposes and is not necessarily structured for research purposes (Dowsley and Hart, 2017; Brimicombe, 2016; Diekman, 2009). Therefore, the research design had to consider how the recorded data could be used to answer the research question. Bekhet and Zauszniewski (2012, p. 6) refer to mixed methods as “across-method” that allows for improved “completeness of data”. This is considered as a more rigorous approach to overcoming the limitations of using administrative data, i.e., using police recorded data (Diekman, 2009; May, 2001). Triangulation is a means of improving the validity of the research design in assessing different data sources that are central to the notion of the research theme (Cresswell, 2014; Spicer, 2012), in this case, exploring vulnerability in a policing context. Triangulation is particularly important in this study due to the complexity of defining vulnerability in a policing setting. The literature review, presented in this thesis, showed a dearth of quantitative research around vulnerability and policing, with much of the literature being theoretical in nature. To explore some of the theoretical concepts discussed in the literature, this thesis employed the use of a focus group to explore practitioner views on the topic of vulnerability and how vulnerability might be identified, as well as explore the policing response. Details for the focus group design and implementation are discussed below, in ‘research method 1’. To compare and contrast the findings from the focus group, analysis of police recorded incident data, recorded crimes and protecting vulnerable people referrals was undertaken, and the details of this design are discussed below, in ‘research method 2’.

Researcher status

The researcher was, for most of this research, employed as a police senior analyst within a police force, understood police data recording and had a network of contacts across a number of police forces nationally. This ‘insider researcher’ status (Yaacob, 2016; Brown, 1996) offered the research a unique position and helped understand the recorded data sets. In addition, through force contacts, the researcher was able to arrange discussions with police officers and police staff. Simmel (1950) argued that an insider researcher may not be objective. However, Yaacob (2016) found

benefits of being an insider researcher, such as less 'red tape' in accessing data, which can speed up the research process, whilst also understanding what data is available and how it can be interpreted. Further to this, Davies (2016) noted that police forces can be more amenable to findings from research that is developed from the 'inside'. For the qualitative aspect of this research, being a police analyst supported the "narrative interpretation" of findings from the focus group and helped bridge academic study with practical knowledge (Dwyer and Buckle, 2009, p. 55). Similarly, it supported the analysis of the data sets in understanding the context of data collection.

Further to this, it is worth noting that the researcher has long been an advocate of policing and law enforcement, even during discussions of police cuts and abolition (Vitale, 2017). The researcher has a BA (Hons) in Criminology from Keele University, which included a six-month student exchange at the University of Maryland, USA. While studying in the USA the researcher worked for Maryland State Police as a Special Police Auxiliary Officer. The researcher also studied at the University of Manchester, gaining a Master's degree in Criminal Intelligence Analysis over a 3-year period on a distance based study programme whilst being employed as a police analyst.

The idea to study vulnerability in a policing context presented itself whilst being involved in multi-agency meetings that involved making decisions about resource allocation to vulnerable people. At the time, multi-agency partnerships were tasked with supporting vulnerable families as part of the National Troubled Families programme (Lambert and Crossley, 2017; Hayden and Jenkins, 2014). Frustrated by the lack of evidence to define or identify vulnerability, the researcher wanted to improve the evidence-base to support the direction of service provision.

The researcher believes that the general underlying principles of vulnerability and their impact on crime are supported by neoclassical criminology arguments (Cote, 2002). While neoclassical theory is a revisionist development of classical criminology, it takes into consideration situational context and how individual circumstances can influence criminality and being a victim of crime (Garland, 1995).

Political stance

The political view of the researcher may also offer some insight into how the research has been framed. The researcher is inclined to favour 'the triangle' when discussing the representation of society (Brown, 1979). This is where society is viewed as a hierarchy with few people at the top possessing most of the wealth but with the majority of people at the bottom. In this model the concept of crime is that it occurs in the context of struggles within the hierarchy of control and power. In addition, a critical view of this system is that people at the bottom are over-represented in the justice system (including prison).

Ethics

Ethical considerations: use of participants

To minimise any impact from compromise by or towards the focus group participants, a participant information sheet and consent form were provided (Ali and Kelly, 2012). These forms detailed the purpose and benefits of the research and how the data would be collected and used. All participants were informed of the process for withdrawing at specific points of the research. Participant consent was given by signing the forms prior to being involved in the research. A copy of the forms is provided in appendix 6.

Ethical considerations: use of data

All primary and secondary data that was collected for this research was coded to maintain anonymity of those involved, whether they were a focus group participant or an individual association (e.g., recorded victim of crime) with a policing incident. The data was securely stored on internal systems within the police force. Where data was transferred to the University system for analysis in SPSS, the data was further coded, and no personal information was transferred.

Ethical consideration: anonymising the source

The police force that provided data for this research was anonymised for analysis. This was to protect victims and those classed as vulnerable from potential

identification. This research received ethical approval from the University of Central Lancashire, and informed consent from the police force (Matthews and Ross, 2010). In addition, it was considered a prudent option to remove details identifying the police force(s) as dealing with vulnerable people can be emotive and comments about police practices may be taken out of context (Grønmo, 2020; Vainio, 2013; Ali and Kelly, 2012). Therefore, the police force and any references to it have been removed or redacted.

Research method 1: Qualitative research and exploratory focus group

Qualitative data from an exploratory focus group

The purpose of a focus group is twofold: firstly, it allows the research to explore topics where there may be little knowledge available (Stewart and Shamdasani, 2015; Newman, 1997). In this case, it was used to explore practitioners' ideas about how they define, identify, and respond to vulnerability (Tonkiss, 2012). The contextual information provided by focus group participants helped provide in-depth information that was not available in the literature (and on reflection, it was not available in the collected data either). The use of a focus group can help stimulate debate and draw out key issues from the participants, which allows the research to explore potentially new ideas or themes not previously considered. This can be developed through communication between participants that is stimulated through the group dynamics and discussion (Noakes and Wincup, 2004; Albrecht et al., 1993). When the responses are so obvious, there is often little need to provide supporting information or conduct detailed analysis as the results will be straight forward (Stewart and Shamdasani, 2015). For example, participants argued that vulnerability was not clearly defined and that they were unsure of what managers expected of them when dealing with vulnerable people and therefore, impacted on how officers responded (for further details please refer to chapter 5). This contextual information gathered during the focus group discussions may have been missed using a different research method, for example, a series of interviews may have missed some context due to the more formal nature of conducting research interviews (Ritchie and Lewis, 2003).

Secondly, as part of this research structure, the focus group was used to gather findings at the beginning of research to explore new ideas and to look for, and gather, contextual detail (Noakes and Wincup, 2004; Jupp in McLaughlin and Muncie, 2013) and “thick description” (Walsh, 2012, p. 247). The notion of developing ideas and themes following the focus group lends itself to grounded theory. Grounded theory is a form of qualitative research whereby themes are generated from the primary data collected, i.e., from the focus group, as opposed to the themes being decided at the start of the research process (Matthews and Ross, 2010). Whilst the concept of vulnerability was the main issue to be explored by the focus group, the nature of the discussion was led by the group. This approach helps reduce researcher bias as they will not have any preconceived ideas about the topic under exploration (Noakes and Wincup, 2004). Allowing the group to lead on the discussion is important when researching policing, as exposure to certain events and interactions are otherwise limited, meaning that the public may not fully understand such exposure (Martin and Tong, 2016). Furthermore, this type of data would not be possible to collect from police recorded data, which is governed by specific data collection frameworks (NPIA, 2011).

The focus group participants

A total of 28 police officers and non-operational police staff were invited to engage in the focus group (it was anticipated that not all would be able to attend due to shifts, leave and training absences). These individuals were identified through the researchers existing professional network). They were invited to attend based on their current role that involved dealing with vulnerable people and, although not paid to participate in the study, they could attend the focus groups during working hours. Research varies on the optimum number of participants to engage with this research method: Newman (1997) suggests participants should range between 6 and 12, Matthews and Ross (2010) suggest between 5 and 13, and Cresswell (2014) suggests 3 and 10 or between 20 and 30, depending on type of research. In total, there were 15 active participants in the focus group. The sample could be regarded as being at the top end of the suggestions, but within the bounds of research recommendations. This type of sampling approach is a purposive sample (Searle, 2012a; Hagan, 1993). A purposive sample was used as it was a more realistic

approach to better understand the research problem from a police practitioner perspective (Cresswell, 2014). It must be stressed that purposive sampling is a nonprobability sample (Zack et al., 2019) and does not seek statistical representation. However, it is a useful strategy to elicit a broad range of information, opinions and experiences on complex topics that may otherwise be difficult to access (Betts and Farmer, 2019; Karlsson and Christianson, 2003).

All participants had a minimum of five years' service in policing and a minimum of 12 months in their current role. The participants included four police staff roles (two males and two females) and 11 police officers ranked from constable (three females), Sergeants (two males and two females) and Inspectors (four males). These included representatives from the:

- Early Action Team: a specialist team who deal with repeat callers who, due to vulnerability, call the police to aid them. This can involve confused members of the public, those suffering mental illness, the elderly and those with learning difficulties.
- Community Safety Department: Who deal with community-based concerns.
- Public Protection Unit: who deal with children and adults who are vulnerable to sexual exploitation or physical abuse.
- Integrated Offender Management Unit: who assist repeat offenders desist from further offending.
- General uniformed response: who are first responders to people in crisis.

The sample range of participants improved the chances of reduced bias that can sometimes be attributed to group work (Matthews and Ross, 2010). It was important to ensure that a range of participants were able to take part in the focus group and that discussions were not dictated by a small number of individuals. This can have a negative effect on the outputs, for example, remain fixed on certain viewpoints (Griffin and May, 2012), and that group pressure can challenge participants to be realistic in their discussions (Albrecht et al., 1993). On this occasion there were no dominant voices, and the discussion was balanced across the participants.

The focus group method

The focus group was in person and structured in three parts: an introduction, a workshop, and then a group discussion, which was based on a number of questions to support facilitation as defined by Matthews and Ross (2010). The focus group commenced with a ten-minute introduction regarding the aims of the study, which were based on early findings from the literature review. This helped 'set the scene' and was used to encourage group discussion regarding the research topic (Noakes and Wincup, 2004). The next part of the focus group exercise introduced five questions to help explore the main research question in more detail. The questions were a subset that underpins the main research questions: how the police define, identify and respond to vulnerability. These were presented verbally and on a PowerPoint slide to the participants by the researcher and were based on the initial literature review:

1. What is vulnerability?
2. Who are vulnerable?
3. Why should the police respond to vulnerability?
4. How should the police respond to vulnerability?
5. What evidence-base is required (in order to effectively manage / respond to vulnerability)?

To facilitate the response the questions were individually written in one of five workstations. The participants were instructed to visit the five separate workstations around the room. This utilised a method of breaking down the collection of information into manageable sections, which encourages participant engagement (Tate, 2009). Each workstation had the five questions (listed above) replicated on five separate sheets of flipchart paper. Participants were then asked to respond to each question by writing on comments on 'post-it' notes and sticking them to each specific workstation, as a means of data collection. To maintain anonymity the participants were asked not to write their name or anything that could identify them. The participants did not have to go through the workstations in any particular order. This ensured that movement between each station was free flowing and not congested.

An hour was provided for this task, which appeared adequate as all participants had visited each workstation and had stopped writing by the time they were recalled into plenary. The group then reformed to discuss each of the headings, to further explain their comments and to consider further opinions based upon what they had heard from the other participants and notes taken, and later transcribed. The comments from participants, i.e., focus group data, were collated by each question from the relevant workstation and then grouped under specific headings (Rivas, 2012; Matthews and Ross, 2010). A summary of each section was transcribed with key quotes being extracted as quintessential to each relevant section and these results are discussed in chapter 5. A summary of comments have been included in appendix 2.

Research method 2: Quantitative research: the use of police recorded data

Quantitative data from a UK Police Force

Police forces are mandated to assist vulnerable people (HMICFRS, 2015). As such, there has been a growing pressure on police forces to collect data on vulnerable people in order to satisfy HMICFRS inspections (HMICFRS, 2021; 2018a). However, there is no national standard governing how each force collects the specific data and there are various ways in which this is done (HMICFRS, 2015). For some police forces this has amounted to attaching ‘markers’¹⁴ to an event, i.e., crime or incident, so that it can be indexed and searched for later (Grønmo, 2020; HMICFRS, 2015). The purpose of the quantitative part of this research was to explore recorded police data to analyse how vulnerability is captured and what can be learned from how the police record vulnerability in their data (HMICFRS, 2021). The recorded data considered for this thesis consisted of three data sets: recorded incidents, recorded crime data and PVP (protecting vulnerable people) referral data, the latter data set that was mentioned by the focus group participants as a means to better understanding vulnerability (see chapter 5). All data sets were for the complete year 2017, from 1st January through to 31st December. The recorded data sets used in

¹⁴ Markers are fields of data that have been appended to existing cases. This is discussed further in chapter 4.

this thesis are secondary data, which means that the data has already been collected, and usually for different purposes (Matthews and Ross, 2010; Thomas, 1996). It was essential for the research in this thesis to question how the police might identify vulnerability from their own recorded data, or how they record vulnerability that has already been identified, i.e., through an interaction with police that has been subsequently recorded (for example, responding to a call for service). Data collected by organisations is often the driving force for decision-making and activity and as such, it is an important element of this research in exploring the impact of police recorded data on the research question (May, 2001; Thomas, 1996). To ensure that this thesis and the research design are transferable and future-proofed, details regarding the police force data collection process used are detailed in the following chapter (see chapter 4). This will help alleviate potential issues in future research regarding data provenance from police forces (Simmhan et al., 2005; Tan, 2004).

Methods of data analysis

There were 3 types of recorded administrative data (Hickman, 2014) used for analysis in this thesis. Details of the analysis and exploration of the quantitative data sets is provided in chapters 6, 7 and 8. These results chapters examine the statistical data for “frequencies, distributions and correlations” (Grønmo, 2020, p. 400), to draw out key findings and conclusions regarding what the police are recording on vulnerable people in comparison to non-vulnerable people. Statistical analysis is conducted in each data section. The types of analysis applied were dependent upon the data source. The different data sets were extracted from different police data sources and there were a variety of fields of data collected in each data set. Towers (2018) and Harron et al. (2017a) have noted specific challenges in using administrative data for research. Whilst this research has tried to be consistent in its analytical approach to the 3 quantitative data sets, some analysis has been dependent on the data available. To improve the potential for further analysis new fields were created or recoded. Where possible, categorical variables were re-coded in a dichotomous manner, for example, vulnerability was recoded as present (1) or not present (2) (Phellas et al., 2012; Rees, 2003). Whilst it could be argued that this approach may lose some data, it does help simplify the analysis (Grønmo, 2020). This was completed to conduct inferential statistical analysis using

the chi-square test of association (Grønmo, 2020; Rees, 2003; Kanji, 1999). This test examined if there were any statistically significant associations within the data (Chamberlain, 2013; Lydersen et al., 2009; Rees, 2003). Findings were, where possible, compared against findings from the focus group and the wider literature for discussion.

Benefits of administrative data

The access to the variety of police administrative data for this thesis has been of great benefit for research purposes (Brimicombe, 2016). At the time of this study there has been limited research into policing vulnerability through the use of police recorded data. The insight into what is collected and recorded is of great value to researchers and this alone can help improve the wider understanding of how the police identify vulnerability (Asquith and Bartkowiak-Théron, 2021). This also helps future research and how researchers might use police data.

Data limitations: the need for cleaning and coding

Generally, police recording practices are met with mixed reactions (Brimicombe, 2016; Neyroud, 2008). Crime recording should adhere to the minimum standards as required by the Home Office and detailed in the HOCR (Home Office, 2021; Gov.UK, 2011). However, despite incident recording having its own set of standards (NPIA, 2011), the actual data collected by the police can be flawed (e.g., missing fields) which limits the types of research and analysis that can be conducted on police data (Towers, 2018; Brimicombe, 2016; Innes and Innes, 2013). A key aspect of this is the live time reporting in which the call handler attempts to speak with the caller whilst recording details of the call (Gillooly, 2020; Júnior and Muniz, 2006). The quality of recorded police data is often a limiting factor for research, and it is not uncommon for many fields to be missing, left blank, input incorrectly or not contain the data expected within the field (Brimicombe, 2016). Prior to analysis the data had to be assessed if it was 'fit for purpose', which included data cleaning. Data cleaning is common in the use of secondary data to ensure that it is fit for research purposes (Harron et al., 2017a; Seale, 2012b). Therefore, in order to prepare and 'clean the data' for analysis a number of the fields were 'cleaned', with some data entries being removed (this is in addition to some variables being recoded or formatted). Details of

recoded variables are included in each relevant quantitative data chapter, along with a coding table in appendix 3.

Recorded Incident data

A recorded incident is recorded within a data warehouse system called STORM. Access to STORM can be done in a couple of ways. Firstly, STORM can be accessed directly through the 'front-end' by any member of staff with an appropriate password and access. Police staff within the Performance and Data Management team can also access STORM data by direct access into the database through SQL Server Management Studio¹⁵ (also known as management studio, and herein as the common reference, SSMS). SSMS allows the user to script a query to access specific information from a series of database tables. A SQL¹⁶ (Structured Query Language) query was written to extract recorded incident data for this thesis. Details of the data extracted can be found in chapter 6.

A second SQL query was written to extract incidents that had either of the following markers (also referred to as 'qualifiers' and 'tags'):

- A mental health tag (MH Tag),
- A vulnerable person qualifier (VP qualifier),
- A vulnerable qualifier – for general concerns regarding vulnerability (VU qualifier),
- A vulnerable child qualifier (VC qualifier),
- A mental health qualifier (MH qualifier).

These additional fields were then recoded into numbers for data analysis. The data extraction query for all incidents returned 572,749 recorded incidents. The data

¹⁵ SQL Server Management Studio or SSMS is a software tool for managing data warehouses that have been built in various SQL formats.

¹⁶ Structured Query Language, more commonly known as SQL (and pronounced 'sequel') is a computer language designed for storing, manipulating and accessing data in data warehouses.

extraction query for incidents that contained a tag, qualifier or marker returned 28,048 rows of data.

Recorded crime data

The recorded crime data for the UK police force used in this thesis was stored in a database called Crime2. The data warehouse Crime2 can be accessed in a couple of ways, similar to the incident data warehouse. Firstly, Crime2 can be accessed through a 'front end' interface, called SLEUTH, for appropriate staff members. This is a service-user interface that provides a user-friendly approach to explore recorded data. However, bulk data downloads are not as easy to access in this way.

Therefore, a similar approach to the recorded incident data was taken: an SQL query was written in SSMS and used to conduct the bulk data extract, and this returned a total of 114,279 recorded crimes (rows of data). There were 11,648 recorded crimes that had a marker for vulnerability. Details of the data extracted can be found in chapter 7.

Recorded PVP referral data

The previous two data sections have examined the main police recorded data sources (Home Office, 2021; NPIA, 2011). There is also a third data set that collects information on vulnerable people which is known as PVP (protecting vulnerable people) referral data. PVP referral data is collected by police officers and police staff who are concerned about an individual who may be vulnerable (Shorrocks et al., 2019a). When this occurs, the responding staff completes a PVP referral form. The data from this form is then sent to the MASH (Multi-Agency Safeguarding Hub) where the case is assessed and if needed, the case is referred to the most appropriate agency to deal with it. An SQL query was written in SSMS and used to conduct the bulk data extract, and this returned a total of 57,981 recorded PVP referrals (rows of data). This is discussed in more detail in chapter 8.

Recoding police recorded data

A common problem in recorded police data is how address details are collected and how the data links between variables, for example, event to place of offence (Harron

et al., 2017b; Brimicombe, 2016). Recoding data is often required to overcome issues within secondary data (Chamberlain, 2013; McKean and Byers, 2000). Sometimes this involves creating new fields of data required to answer a specific research question (Seale, 2012b). To provide a coherent address field for data analysis, e.g., for conducting analysis on repeat locations, new fields were created in each of the recorded data sets. Each process was slightly different due to how the data was structured in each set.

There are similar issues for exploring data on individuals (Innes and Innes, 2013). A series of steps were taken to create a unique identifier for individuals within the three different data sets. As a number of different types of individuals could be recorded, it was important for the analysis in this thesis to focus on the victim and key individuals (see literature review). To support this analysis, a new unique identifier was created by concatenating a number of fields. Further details of the process for recoding fields can be found in appendix 3.

Rationalising the literature

The literature review details the range of literature and research associated with the concept of vulnerability. Indeed, figure 2.1 (on page 25) shows the increase in such research. The selection of literature considered for this thesis was based on that which has direct relevance to policing, i.e., where policing was a key factor in the literature. Despite the growing volume of literature, this approach focussed the literature selection in relation to the research question.

Limitations

There can be a number of challenges within a mixed methods research approach, such as integrating and presenting the findings from the various data collection phases (Spicer, 2012; Lieber and Weisner, 2010; Matthews and Ross, 2010). However, mixed methods also offer many more opportunities, such as wider exploration of the research topic, which will be covered in the discussion chapter (Tariq and Woodman, 2013). Additionally, each method presents individual challenges that require addressing, and key challenges are discussed next.

Limitations with exploratory focus group

The limitations of the focus group for the exploratory research centred on the size of the focus group. Only one focus group from one UK police force was used for this study. Clearly, this limits the wider generalization of any key findings. For example, would there be a difference in approaches towards vulnerability between smaller forces and the larger metropolitan forces. Additionally, it was not possible to record or transcribe all conversations at each workstation point, which may have lost data (Cresswell, 2013). To mitigate the potential loss of data during movement and discussion between workstations, a final round-up discussion was held for participants to offer any further or final comments.

In addition, Matthews and Ross (2010) note that the use of a purposive sample means that it is not always possible to draw generalised findings. However, the strength of using the focus group as a means of data collection should be noted, as it offers an opportunity to explore new ideas regarding topics that are difficult to access without exposure (Stewart and Shamdasani, 2015; Tonkiss, 2012; Matthews and Ross, 2010).

Limitations of using administrative data

Crime statistics and recorded police data are generally used as administrative data (Tseloni and Duncan, 2022; Hickman, 2014; Thomas, 1996). Fox et al. (2006) note that this is mostly in relation to performance management, policy and communicating with the public (the latter being an important aspect for the PCC and police legitimacy). Whilst police recorded data might provide an insight into operational policing, they do not provide an accurate account of criminal activity (Finch and Fafinski, 2012). Often referred to as 'the dark figure of crime', there are many crimes that go unreported and are absent from official Home Office statistics (Tierney, 2010). This makes it difficult to assess the true picture of crime occurrence and harm (Hale et al., 2013). Buil-Gil and colleagues (2021) found that the dark figure of crime varies across neighbourhoods and is linked to social harmony. They add that in areas that have a low sense of community, there are greater inaccuracies in recorded crime data (Buil-Gil et al., 2021). Therefore, any research examining crime through crime recorded data will only reflect one portion of crime that has occurred.

Administrative data can be a source of large and complex quantitative information that is collected in the delivery of a service as opposed to answering a research question (Connelly, et al., 2016). It can be argued that police statistics are not social products but organisational products as they are merely a recording system for the police authority and the Home Office (Hickman, 2014; Thomas, 1996). Elias (2014, p. 47) explains it as:

“Data which derive from the operation of administrative systems, typically by public sector agencies. They cover activities such as health maintenance, tax and social security, housing, elderly care, vehicle and other licensing systems, educational progress, etc. While such data are not designed for research purposes, they often have significant research value, especially when linked to other datasets or to user-generated surveys.”

This immediately raises issues identified of using administrative data in research. Some problems have been ‘created’ through the manner in which the police record incidents of crime and disorder (Brimicombe, 2016; Hickman, 2014; Alison et al, 2001). May (2001) points to two major issues when dealing with official statistics that is most pertinent to police statistics. Firstly, there is what is described as discretionary procedures that refer to the decisions by victims/witnesses whether to report or not to the police as well as the police decision to actually record the incident. The second issue is institutional practices that refer to the offences that are affected by the police service and governmental policies - what is recorded and how it is categorised. These two issues must be considered when dealing with recorded police data and they should not be taken at face value, as they do not necessarily give a true account of contextual factors. It is important to note that the recording of most incidents is made directly onto a computer system that has specific fields that need to be completed (Brimicombe, 2016; May, 2001). How these logs are completed, including the use of any markers, often depends upon two key factors. Firstly, the call handler recording the incident and/or the caller (police or complainant) reporting the incident (Gillooley, 2020). Secondly, distortions of events can occur depending on what is recorded by the officer at the scene (Alison et al., 2001).

Furthermore, computer systems are often restricted in the way they store data, and it is not uncommon for fields within the system to force the person inputting information into making a decision about the categorisation of the incident (Taylor and White, 2000). However, this type of data is often used as a form of social product in that they construct versions of events within a given community. They are then used to steer police activity on a tactical and strategic basis, yet the context can be missing, and hence the use of focus groups is important to layer into the research design in order to provide a level of context that may otherwise go missing. Again, this reinforces the use of mixed methods and triangulation for this study's research design.

Dealing with missing data

There was an amount of missing data from the various data sets extracted from police systems. Incomplete data may bias the results of the analysis and as such it is noted as a significant limitation (Alison et al., 2001). Innes and Innes (2013) found police recording a hindrance to identifying vulnerability due to how certain data fields were recorded. Furthermore, Brimicombe (2016) and Hickman (2014) noted that, whilst recorded police data was useful, it was far from perfect for research. This also supports the use of a mixed methods approach and reinforces the argument that triangulation can be useful to reduce the limitations within the methods used for this study.

External limitations

It would be remiss not to mention the impact of the global pandemic. Covid has clearly had an impact on daily life but also on research (Marinoni et al., 2020). There was a significant time delay in conducting some of the quantitative analysis due to covid restrictions and access to the UK police force used in this thesis. This impacted on the researcher not being able to access the original data sample for 18 months.

Summary of chapter

The aim of this chapter has been to evaluate and justify the methods employed for the research used in this thesis. The topic of vulnerability is a relatively new phenomena in policing and is now the subject of thematic inspections for all police forces in England and Wales (HMICFRS, 2015). That does not mean that systems and processes are in place to readily identify and respond to vulnerability (Christmas and Srivastava, 2019; HMICFRS, 2015). This has led to a number of considerations towards the research design about how best to elicit data and information that could answer the research question. Jupp (2000) suggested that some research questions cannot be answered by empirical inquiry alone, and that is certainly true in this case. A mixed methods approach has been deemed the most appropriate method to answer the research question, how the police define, identify and respond to vulnerability. By triangulating results from different research methods, the research design offers a more balanced and rigorous approach (Bekhet and Zauszniewski, 2012; Spicer, 2012; Matthews and Ross, 2010). It is also important to consider the outcome of this research and the impact on national policy and practice for policing. The research design offers a transferable approach to researching the topic that can be employed elsewhere. Policing research should be defined by its “practical and direct use in operational policing” (van Dijk et al., 2016, p. 29). Therefore, it is important to design this research to ensure that it could support future police activity as much as possible. This thesis now turns to explore how vulnerability is captured in police data sets, which will further support the transferability and transparency of this research.

Chapter 4: Using recorded police data for research

Aims of chapter

This chapter provides background information for the data used in this thesis. The purpose of this chapter is to establish the context for how the quantitative data is gathered and used by the police force (Boulton et al., 2016), but also how the data can be used to answer the research question (Spicer, 2012). It will provide an overview of the police force that was used in this thesis, which will include a summary of the geographic and demographic area that it covers in order to understand the environment in which the police force operates. This is particularly important when considering the nature of incidents that the police respond to, for example, the types of events and communities that the police interact and deal with (Bartkowiak-Théron and Crehan, 2010; Sun et al., 2008). This chapter supports the transferability of this research design to other police forces and law enforcement agencies for similar research (Innes, 2010).

The chapter will start with an overview of the police force where the data was collected and recorded. As well as the points outlined above, it will provide key police mission statements and priorities, for example, the Police and Crime Plan used by Police and Crime Commissioners (Lister, 2013; Joyce, 2011). The chapter will then move on to discuss how calls for service are reported to and recorded by the police force (Gillooly, 2020; Simpson, 2021; NPIA, 2011): this may be as a recorded incident (NPIA, 2011), recorded crime (Home Office, 2021) or protecting vulnerable people (PVP) referral (Shorrocks et al., 2019a; Jeyasingham, 2017). The chapter will then discuss how the police respond to calls for service and in what capacity, this will include how vulnerability is identified during the processes discussed. The chapter will close with a summary of key points in relation to the thesis research question.

The police force in this study

The county covered by the police force covers 1,180 square miles. It is an area of contrasts with geographic and demographic diversity, large urban and large rural areas. The population of the area is approximately 1.5 million, with up to 40,000

more travelling into the county to work each day (removed a¹⁷). The 2011 census for the area (removed b) shows that the largest ethnic group is white (90%). The Black and minority ethnic (BME) communities makes up 8% of the population, with the majority of this group being Asian/ Asian British. The county has pockets of severe social and economic deprivation and has five of the top 50 most deprived areas in England, according to the Indices of Multiple Deprivation 2015 (gov.uk, 2019). The area is covered by a two-tier authority (one County Council with 12 District Councils) and two unitary authorities (Chisholm, 2004; gov.uk, n.d.). This can be an important feature for determining how policy and practice decisions are made for social care and public health (Elcock et al., 2010; Andrews and Boyne, 2009). There is a single Fire and Rescue Service for the whole of the area and there are seven NHS Clinical Community Groups (CCGs) (NHS Confederation, 2021; Checkland et al., 2013; NHS, n.d.), along with five NHS Trusts (NHS, 2022). Therefore, the police have to manage and engage with a range of partnerships when dealing with complex issues (Christmas and Srivastava, 2019; Bartkowiak-Théron and Asquith, 2017).

The police force has just over 5,500 staff (3,000 police officers and 2,500 members of police staff) and has a budget of approximately £319 million (removed c). The police county footprint is split into three main policing areas, known as divisions, or BCU (Basic Command Units) (HMICFRS, 2018c). Each division is run by a Chief Superintendent, known as the Divisional Commander. Each divisional commander has responsibility for the local neighbourhood policing teams that will deal with a variety of calls for service (Longstaff et al., 2015), along with supporting community safety issues (Loveday, 2006), in line with police and crime plans (discussed below) (Brain, 2014).

The police force and vulnerability

The move to support and target vulnerable people has developed from a rhetoric of supporting and safeguarding the most vulnerable in an effort to reduce long-term demand (Kirby in Scott and Clarke, 2020). This evolved from national austerity

¹⁷ Details and references that directly relate to the police force have been removed or redacted. Where this has been the case the citation will state 'removed'.

measures when all police forces (and other public services) in England and Wales had reductions in funding since 2009 until recently (Smith, 2016; Millie, 2014). The austerity cuts affected not just the police, but also had a negative impact on the provision of health services for a range of deprived groups (Stuckler et al., 2017). Therefore, there has been a desire to look towards new, cost-effective ways of reducing crime, harm and anti-social behaviour (Rogers, 2014; Greig-Midlane, 2014; Millie and Bullock, 2012). Working with other services and tackling the most vulnerable has been regarded as one approach to achieve this (Bartkowiak-Théron et al., 2017; Bartkowiak-Théron and Asquith, 2012b).

The Police and Crime Plan is required by law and is produced and published by the Police and Crime Commissioner (PCC). The plan sets out the main priorities and objectives for the police force and usually lasts for the duration of their elected term in office (Brain, 2014; Lister, 2014). The purpose of the plan is to set out the police and crime objectives and how these will be met by the police force through its resourcing and finance planning by the PCC (Brain, 2014; Loveday, 2013). During the fieldwork for this thesis there have been two PCCs and two different Police and Crime Plans that were reviewed. When the research for this thesis began, tackling vulnerability was a key issue for the police force: the Police and Crime plan 2016-2021 stated that “supporting vulnerable people and victims” is a priority for the PCC and for the Constabulary (removed d, p. 22). This included the delivery of a victim service to support victims of crime, commission domestic abuse services, ensuring vulnerable young people were protected from abuse and helping “people before they reach crisis point to get the help and support they need to turn their lives around through early action and intervention” (removed d, p. 22). Indeed, tackling vulnerable people was a significant part of the plan. However, in 2021 there was a new elected PCC and the police and crime plan was altered to reflect a new set of priorities.

The new police and crime plan 2021-2025 does not directly list tackling vulnerability as a discrete priority (removed e). Vulnerability has now been woven through all the priorities like a golden thread and is discussed in relation to tackling domestic abuse and sexual violence (in more depth than the previous plan), as well as reducing harm to victims of anti-social behaviour. In addition to these priorities, the plan discusses vulnerability as part of supporting victims along with a pledge to support a range of

victim support services (removed e) in line with the code of practice for victims of crime (Ministry of Justice, 2021). Vulnerability is also discussed in relation to victims of serious and organised crime, burglary and robbery (removed e). The plan gives the impression that dealing with vulnerability is a key aspect of all police business in the plan. However, McDaniel (2018, p. 41) argues that the priorities in many police and crime plans are “ambitious” and that the plans do not get more specific or offer much direction for police officers, and states that “the plans are almost entirely devoid of specific workable information”. This could add confusion to expectations of front-line staff from senior leaders, which was highlighted by HMICFRS (2015). This was also noted by the participants in the focus group (see chapter 5). Being able to decode rhetoric and terminology is important for public reassurance, frontline staff and working in partnership (Wells, 2015). However, as the PCC is an elected official there is an undercurrent of politics to the police and crime plan that seeks to enhance the public vote (Lister and Rowe, 2015).

Police legitimacy

Police legitimacy is a key concept in policing research (Hough, 2020; van Dijk et al., 2015; Tankebe, 2014). Legitimacy is concerned with how the police are able to operate effectively and fairly in society with support from the public (Sklansky, 2013). Shannon (2022, p. 43) offers a simple and straight forward definition of legitimacy as “a right to exercise power” and legitimacy is symbiotically connected to trust (Rahtz, 2016). How communities view and support policing is often a result of trust in the police (Hough, 2020). Increasing legitimacy and trust by tackling vulnerability could be regarded as a motivating factor for police forces to improve their responses to dealing with vulnerable people (Bartkowiak-Théron and Asquith, 2015; Tyler, 2004). This is why police and crime plans will emphasise the importance of vulnerability as this will be a key message to communities in asserting the intentions of contemporary policing. It will also answer why the police are becoming more involved with a range of societal issues and not just about enforcing the law (Kirby, 2020).

Calls for service

The term 'call(s) for service' (sometimes referred to as 'call(s) for assistance') is used to reference when the police receive a call (Simpson, 2021; Gillooly, 2019; Brimicombe, 2016). Any member of the public can call the police at any time and the police are often regarded as a 24/7 service (Kirby, 2013). When a member of the public or another agency calls the police, the call goes through to the Force Contact Management Centre, also known as a Force Control Room or FCR (different police forces have different names and there is no standard name for the contact centre). For the purposes of this thesis, in relation to the police contact management centre, the term FCR will be used from here on in. In the FCR are several staff known as call handlers or contact management staff, who are dedicated to dealing with telephone calls from the public or any other agency that may call for assistance (Simpson, 2021). For the purposes of this thesis, in relation to contact management staff, the term 'call handler' will be used from here on in. Call handlers are those responsible for taking calls and making decisions, based on recording standards (NPIA, 2011), of if and how the call is recorded¹⁸ and if a policing response is required.

There are two telephone numbers that can be used to contact the police. The 999-emergency service should be called for police assistance when a crime is in progress, a suspect of crime has been spotted, when there is danger to life or when violence is being used or threatened (police.uk, 2022). Calls through to the 999 service receive quick time response, but any further action may alter based on the call handler's assessment of the call. For example, the nature of the call may be downgraded from one that requires an emergency response to a 'planned' response (see next section for more detail). Initially, this is through taking key details from the caller. The call handler will first be assessing if there is a threat to life or other imminent danger that requires immediate attention. Gillooly (2020) has noted the importance of call handlers' ability to assess risk at the first instance, arguing that call handlers are not gate keepers but risk assessors and should be trained as such.

¹⁸ Recorded refers to a computerised record being created that records details of the call (NPIA, 2011).

Similarly, Cromdal et al. (2008) have previously recognised the importance of capturing the right level of description to understand the context of the caller's situation that is being reported. Examining this data and the subsequent response has been noted as a research gap, as has examining the impact of call handler training (Gillooly, 2020).

Responding to a call for assistance

Once a call has been assessed by the call handler there are five different police response grades that will be applied to the call:

Grade 1: Emergency – police response required within 15 minutes of the call.

Grade 2: Priority – police response required within an hour.

Grade 3: Planned – police response to be planned in within two days.

Grade 4: Telephone resolution – the incident is recorded but there is no police deployment.

Grade 5: Police reports – there are a number of reasons for this grade. Often it is to record something that requires an incident log that has not already been recorded.

Calls may also be received through a non-emergency 101-telephone service. The 101-telephone service is for reporting crime or other concerns that do not require an emergency response. The aim of the 101-telephone service is to reduce the demand on the 999-emergency telephone service.

The crime recording process

The Home Office uses specific counting rules that are constantly being reviewed and often result in annual changes to Home Office Code or HOC for notifiable offences (e.g., crime classifications). There are a total of 13 crime classes that are then broken down into 149 offence categories, which are then broken down further into 1,577 HOCs (Home Office, 2019). When a notifiable offence meets a crime threshold it will be categorised as one of many crimes and these are governed by the National

Crime Recording Standards (NCRS) and Home Office Counting Rules (HOCR) (Brimicombe, 2016). The HOCR contains a list of notifiable offences that are “revised from time to time to reflect changing legislation and forms the basis for the compilation of the ONS statistics on police-recorded crime” (Brimicombe, 2016, p. 72). This policy for determining what is or is not recorded as a crime does not include the assessment of vulnerability during the offence taking place. Police agendas change on a regular basis and so the infrastructure for data collection doesn’t always match a change in a new direction that a police force may take (Henderson and Herring, 2012). This often leads to disparate data systems being set up that do not necessarily link across the organisation resulting in information being siloed in specific departments (Ferguson, 2017; Stanko, 2008).

The HOCR provides guidelines about recording crimes. This is detailed under the Police Act 1996 Section 44 (2 and 3) that provides consistency to the process of crime recording. Incidents reported to the police often relate to public safety, crime, antisocial behaviour and transport issues. There are six stages to the reporting and recording process:

1. Incident reporting and recording:

There are several ways in which an incident can be reported to the police. This can be made by victims, witnesses or third parties who can inform a member of police staff in person, via telephone or online reporting.

Additionally, a police officer may discover an incident themselves or another agency may refer an issue to the police, for example through Social Care. HOCR requires that “all reports of incidents, whether from victims, witnesses or third parties and whether crime related or not, will result in the registration of an incident report by the police” (HMICFRS, 2019, p. 6).

When the call handler is recording a call as an incident an ‘opening code’ is added to the incident log. This code is used to identify the nature of the

incident and is used to assess the types of incidents that are currently open¹⁹ and may require prioritisation, for example whether it relates to a road traffic collision or a burglary. Opening codes are important because they allow supervisors to see immediately what type of incident are currently open and prioritise resources accordingly (Home Office, 2021). Recording incidents, whether it is recorded as a crime or not, allows the police to maintain administrative records regarding calls for service (Hale et al., 2013). This is important for determining the level of demand on the organisation, which has come under increasing scrutiny during austerity (Boulton et al., 2016; Elliott-Davies et al., 2016).

2. Deciding if a crime should be recorded:

The HOCR states clearly the reasons for recording a notifiable incident:

“An incident will be recorded as a crime (notifiable offence)

1. For offences against an identified victim if, on the balance of probability:

a. The circumstances as reported amount to a crime defined by law (the police will determine this, based on their knowledge of the law and counting rules), and

b. There is no credible evidence to the contrary.

2. For offences against the state the points to prove to evidence the offence must clearly be made out, before a crime is recorded.”
(HMICFRS, 2019, p. 7²⁰)

¹⁹ A call or log being ‘open’ means that it is currently ‘live’ or being investigated. The status will move to closed once the call has been resolved or the investigation is complete.

²⁰ For more detail refer to Crime Recording Process, available at: <https://www.justiceinspectorates.gov.uk/hmicfrs/our-work/article/crime-data-integrity/crime-recording-process/> [accessed on 1 May 2019].

It should be noted that police forces operate different processes for deciding if a crime should be recorded which has implications for the scope of the incident logs, for example: not all police forces will deploy a resource to every incident. If it is obvious that a crime has occurred the force can record the crime without recording an incident first. Some forces follow this process and in those that do, not all calls about crime will appear in the incident log.

3. Closing incident records:

Incidents can be closed as an incident only or as an incident resulting in a crime. Once a decision has been made to record a crime the incident log is classed as 'closed' and subsequent information is added to the crime record. The crime record will then remain open whilst an investigation takes place.

4. Recording a crime:

If a crime is recorded, there is also a requirement record what exact offence(s) have been committed. If there is more than one victim a crime will be recorded for each victim. All recordable crimes have to be recorded within 24 hours of being reported.

5. Closing crime records:

A crime record will remain open whilst it is being investigated. A crime record may only be closed when it has been detected and an outcome assigned to the crime or it may transpire that a crime never actually happened. If the latter is the case, then the crime will need to be cancelled and there is a strict process in place to ensure that a cancelled crime is auditable.

6. Checking that crime records are correct:

There is a crime registrar in every force and they have the responsibility of ensuring the force is compliant with HOCR and the recording process (Home Office, 2021). The registrar is also responsible for overseeing crime recording changes.

When a call is received

There are a number of parts to the process of receiving and recording a call for service. To illustrate the calls for service process the various stages that a call for service may go through are shown visually in appendix 4. This has been broken down into distinctive parts of how the call to the police has been or could be handled. It has been important to do this in this study to demonstrate the stages at which potential vulnerability could be identified or suggested and then subsequently highlighted in the recording process.

The basic process for receiving a call is as follows:

1. The police call handler receives a call for assistance.
2. The nature of the call is assessed by the call handler.
3. A log is opened. A log is a list of details that are taken by the call handler. At this point a decision is made as to whether a crime or recordable incident has occurred.
4. If there is no recordable incident, then verbal advice is given by the call handler and no information regarding the call is retained. The log is closed.
5. If the call relates to a recordable incident, then an incident log is created and details of the call are recorded. This includes details of the person who called, and the call handler will record a classification (1 to 5) for the call. The classification may change once more information about the situation has been gathered, which can be from either the call or by providing a response. The caller (also known as the 'informant') may not be the person requiring assistance and may be calling on behalf of someone else. This may not necessarily be someone that they know. Therefore, there may be significant information missing from the incident log. This is important to note when conducting incident analysis of this type of data. The call is then graded which may require a police response (as discussed above). A vulnerable marker may be added to the recorded log at this point.
6. If there is sufficient information to suggest a crime has occurred a crime number will be added to the log. This is linked to the incident number and a crime report will be completed. If no crime has occurred, the log will be closed as an incident. A vulnerable marker may be added.

7. If a crime has occurred, a crime report will be added in line with the HOOCR compliance. Details of the offender (if known) will be taken, along with victim details, location details and other factors such as MO (modus operandi). A vulnerable marker may also be added to the crime record, whether one is added to the incident or not. There may also be a 'victim support services' marker added. This sets up an alert to send details to victim support services if the victim agrees and would like post-incident support.
8. The crime will be investigated, and the case file will go through to CJS (Criminal Justice Services) to determine an outcome. This may result in going to court or an 'out of court' sanction. If the case goes to court the victim will be assessed for potential vulnerability in court as per the Victims Code and the use of Special Measures (see chapter 2).

There are other means for incidents or crimes to be reported and recorded by the police:

- Victims, witnesses or other third parties can tell a police officer, PCSO or member of staff either on the street or at the front counter of a police station.
- Victims, witnesses or other third parties may report an incident online.
- The police may discover the incident or crime during their patrol.
- Other agencies may refer them.

There are three outcomes for each call that is received into the FCR. Calls can either be recorded as:

1. No further action (NFA) in which case there are no details recorded.
2. An incident recorded but no crime.
3. A recorded crime.

During this process there are four points during contact with the police at which someone may be identified as being vulnerable (see appendix 4). There is no specific training or guidance for this, and the vulnerability is determined by the call handler and / or the responding police officer.

Recorded data and the use of 'data markers'

Many police forces use 'markers' on recorded data to improve searching and referencing at a later date (Home Office, 2021; Brimicombe, 2016). A marker is a variable within a recorded case that can be searched for specifically. The police force employ the use of 'tags' and 'qualifiers' on recorded incidents. A tag is added during the recording of an incident, but it can be removed also during the recording of the incident. It is used to highlight a potential issue at the time. A qualifier is added at the end of the recording process and is used to indicate if a specific issue was a factor in that incident.

One of the qualifiers is 'VU' (vulnerable) and this is used in reference to someone within the log, either the caller or someone who the caller is calling about, being potentially vulnerable. This process simply records that someone may be vulnerable, rather than ascribe a label of vulnerability. It is important to note that there is no definition or guidance for call handlers when recording a vulnerable qualifier to a log. The call handler assesses the nature of the call and if there is an element of vulnerability about the call, the caller or the reason for the call (Gillooly, 2020; Neusteter et al., 2019). When a call handler closes a log they have to add a qualifier. If they 'check' the vulnerable qualifier a second window will open up with a series of additional check markers. The options on the second window will vary depending on what initial qualifier has been checked by the call handler. On this second window the call handler will have a series of options, the first being 'no qualifier'. There is the option to add further details to the log and mark it as involving a vulnerable child (VC) or vulnerable person (VP). Other options include mental health (MH), drugs (DR) and alcohol (AL).

Other police forces and recorded data

The HMICFRS inspect all police forces on their ability to identify and respond to vulnerability. Therefore, all police forces collect and record data to show how they can identify vulnerability, but the processes vary from force to force (HMICFRS, 2015). There is no standard approach to how forces do this, and it is often determined by the IT systems used by each force (HMICFRS, 2015; Adderley and Musgrove, 2001). Again, not all forces use the same IT systems or data bases,

which can impact on information collection and organisational knowledge (Rogers and Scally, 2018; Gottschalk, 2007). In general, most forces can record vulnerability in relation crimes and incidents but how these are recorded vary from force to force. The main requirement is that all forces can provide performance data regarding percentages of vulnerability and specific crimes and incidents associated with vulnerability (e.g., child sexual exploitation) to the HMICFRS for inspection purposes (HMICFRS, 2021; 2018a; 2015).

Conclusion

This chapter is an extension of the methodology in that it provides context to the quantitative data used in this thesis. It is important to provide a summary of how calls for service are recorded and the various stages that they may go through. This shows where vulnerability may be identified in the various IT systems, but as is shown here, vulnerability is not identified from a medical or professional capacity but merely as a data collection point that can be used for retrieval at a later point. It is also useful for compiling statistics for HMICFRS inspections (HMICFRS, 2021). However, as discussed in the literature review, the findings from the HMICFRS regarding police forces and their identification of vulnerability is inconclusive and questionable (HMICFRS, 2021; 2018a; 2015). The addition of this chapter allows the thesis and research design to be transferable for similar and future research by other law enforcement agencies, either in the UK or farther afield. This means that regardless of how other forces collect and record data on vulnerability, they will be able to replicate this study. Findings from the analysis of the quantitative data will be discussed in chapters 6 to 8. Before this, the thesis will now move to explore the findings from the focus group of police practitioners.

Chapter 5: Findings from the practitioner focus group

Aims of chapter

To reiterate the methodological rationale discussed in chapter 3, focus groups can stimulate new ideas that can support further data collection and the direction of research (Albrecht et al., 1993) which are a common feature of criminological research (Noaks and Wincup, 2004). They allow researchers to explore complex issues with individuals who have specialist skills and knowledge. This approach can draw out knowledge that may be hidden within statistical data. In this instance it was encouraging to determine how frontline practitioners constructed versions of vulnerability. The use of a focus group early on in this research helped develop some initial ideas about vulnerability in a policing context. It provided a useful exercise in providing a rich picture of the theme of this thesis through the experiences of frontline policing practitioners. This research was conducted to develop a sense of practitioner responses to vulnerability and to provide a framework for conducting analysis of the police recorded data. The conclusions drawn from this exercise would not have been possible to access in any other way, for example, from the administrative data (Jones and Elias, 2006).

This chapter discusses the findings that emerged from the focus group workshop and provides a detailed exploration of comments made by the participants. The purpose is to provide a summary of practitioner knowledge in relation to the key research themes and research questions, which was then used to critically evaluate the recorded police data. This chapter presents a summary of key findings from each of the five research questions used during the focus group exercise and discussion (as detailed in the methodology section – see chapter 3).

Focus group questions and answers

The focus group contained 15 active participants. There were five questions that were used to guide the focus group discussions. This next section provides a summary of findings from each question and some of the common answers, after which, findings were grouped under two broad themes: the conceptual theme of

vulnerability in policing and the operational approach to vulnerability. The chapter will now discuss the findings from the focus group discussions and exercise.

Question 1 and 2: What is Vulnerability and who is vulnerable?

The first two questions aimed to elicit discussions on what practitioner's thought were the boundaries of/defined as vulnerability and who was vulnerable. Across the literature there has been much discussion on this as a concept and this was a good place to commence discussions. Fineman (2010) noted that we are all human and therefore we are all vulnerable as all people have needs for survival, and this was one of the first things mentioned: one participant commented: "anyone can be vulnerable at any point during their life". The notion that anyone can be vulnerable was discussed at length by the focus group participants and this has been discussed in the literature too (Cole, 2016; Fineman, 2010). It was noted by the group that people are more likely to contact the police when they are vulnerable. But by considering all callers to the police as vulnerable, it does not narrow the focus as to who should be afforded extra support. This started to show the confusion experienced by the participants about vulnerability. Indeed, Cole's idea that we are all vulnerable and posits, as the title of her 2016 article states, *we are all vulnerable, but some are more vulnerable than others*, which could easily be attributed to a policing context. Crudely, this notion that some are more vulnerable than others move us towards ranking or classifying vulnerability and vulnerable people but is careful not to suggest that one form 'trumps' the other. It was commented that how do they, as police practitioners, determine who is more vulnerable. Indeed, classifications can fail to serve those who have some form of vulnerability that may go unnoticed, which can be an issue for public services (Shannon, 2021; Bartkowiak and Crehan, 2012).

The participants were clear in their discussions that certain groups are more prone to vulnerability than others. Examples they gave included those with mental health issues, children, people with low self-esteem, people with dependency (alcohol or drugs), and those from different cultures. One participant noted that vulnerability is "how someone feels at the time" and this was supported by another participant who said, "anyone can be vulnerable depending on changing circumstances, e.g., bereavement". This subtly notes the importance of situational context, which is a

common criminological topic and one that is a common thread in policing (Wilcox and Cullen, 2018; Clarke, 2013; 1983; Goldstein, 1979). The importance of situation context is a key finding for this thesis and participants considered it as an essential factor in understanding what makes someone vulnerable.

There were other comments that identified the importance of situational context for understanding vulnerability, such as it “could be temporary or permanent” and that it can come at a “time in a person’s life when they feel less able to cope”. This may be due to several factors that result in vulnerable-related circumstances particularly through illness (Trundle et al., 2019), bereavement (Stroebe et al., 2006; Dowdney, 2000) or even divorce (Karela and Petrogiannis, 2020). However, it could also be the result of being a victim of crime and one participant stated that “vulnerability is: victims, exploited and disadvantaged”. This could lead to what another participant noted: vulnerability is a “lack of capability or capacity to deal with circumstances in which you find yourself”. Being a victim of crime can have an impact on a person’s ability to cope with regular daily interactions. The group were clear that victims can be significantly vulnerable. Similarly, Shapland and Hall (2007) found that the impact of being a victim of crime had a wide range of psychological, physical, social and consequential effects. This also builds on work by Kilpatrick and colleagues (1987) who found that victimisation increased the risk of psychological issues, social adjustment and mental health problems. In addition, their research added that some crimes had a far greater impact on victims resulting in post-traumatic stress disorder (Kilpatrick et al., 1987). The impact of crime, or even ASB, can be exacerbated if the person is a victim of hate crime. Iganski (2015; 2001) noted that ‘hate crime hurts more’ and his research showed that victims of hate crime suffered for longer than victims of non-hate related crime and that the victims also had an increased fear of crime following victimisation. Regarding gender, Shaw and Chenery (2007, p. 150) found that “men are affected by burglary victimisation, they simply show the impact differently”. Therefore, policing and wider victim services must consider that feelings of vulnerability may otherwise go unnoticed. It was clear from the focus group that victimisation is a key factor in vulnerability and one that the participants are exposed to on a regular basis.

The feedback from the focus group and victimisation research shows that there are a range of effects, and, like vulnerability, they are not mutually exclusive (Wood, 2020; Farrell and Pease, 2008; Winkel et al., 2003). One participant noted that “different types of vulnerability affect people in different ways”. This mirrored another comment that claimed “everyone [is vulnerable] at different times and for different reasons”. The comments, and wider literature, show that individuals and their experiences can be very different, and their associations and environment may have an impact on their ability to deal with adversity, as one practitioner noted, “a lack of resilience or capacity to protect oneself from a risk or threat and a lack of awareness or comprehension of a risk or threat”. This has certainly been noted as a factor towards grooming of young people for sexual exploitation. Hallett (2016, p. 2147) noted that vulnerable young people in care who feel “unwanted and unacknowledged” can be at risk of being targeted for the purposes of child sexual exploitation (CSE). Once victimised, some victims have, as a consequence, been vulnerable to further victimisation, which has certainly been the case in cases of CSE (Hallett, 2017), human trafficking (Fouladvand and Ward, 2019) and modern-day slavery (Wood, 2020). Shapland and Hall (2007, p. 178-179) refer to this as the “consequential effects” of victimisation:

“Consequential effects: changes in perceived risk of future victimisation. There is in fact a higher actual risk of re-victimisation (the multiple victimisation effect) than first victimisation, with the literature indicating that this is related to victim individual susceptibility, areal characteristics and offender-related effects.”

Winkel and colleagues (2003) have also found that repeat victimisation had a greater impact on a victim’s vulnerability, and they argue that repeat victims should be prioritised by the police for access to victim services. This affirms the importance of repeat victimisation that was also a key point within Goldstein’s (1979) original ideas regarding problem-oriented policing and tackling repeat incidents. Farrell and Pease (2013; 1993) have long argued the importance of repeat victimisation in supporting vulnerable victims. They argue that responding to repeat victimisation should be a central tenet of contemporary policing in reducing harm. However, Pease et al. (2018) have pointed out that in recent years repeat victimisation has dropped from

the police agenda. This is a disappointing finding, especially when the focus group findings and the literature agree that repeat victimisation is a significant form of vulnerability. Additionally, there is research that demonstrates the negative impact that repeat victimisation can have on victims which exacerbates the harm. This thesis argues that repeat victimisation should be considered an acute vulnerability.

When considering vulnerability from a policing perspective most of the attention is towards victims of crime and marginalised groups in society (Bartkowiak-Théron and Asquith, 2015; Mitrović, 2015; Khan, 2013). The targeting and exploitation of vulnerable groups can also lead to an involvement in criminal activities. This was not discussed in much length by the group, but it was noted as an issue of concern by some of the participants with one comment being there is also a “vulnerability to: offend, be a victim, self-harm”. This comment subtly notes the potential for involvement in crime or ASB by those vulnerable to exploitation, something of a common topic in criminological study. Criminology is traditionally focussed on the criminal propensity of the offender, along with psychological, societal, physical, and environmental factors that may influence offending behaviour (Liebling et al., 2017; Hale et al., 2009; White and Haines, 2001). Research specifically discussing vulnerability and its impact on offenders tends to address the offender journey through the criminal justice process (Bartkowiak-Théron et al., 2017; Dehaghani and Newman, 2017; Liebling, 1995).

Additionally, concern was raised regarding exploitation of vulnerable people through controlling behaviours. This was referred to by one participant who noted, a type of vulnerability is “when controlled by another, for example, relationship, gang, peer pressure”. Coercive control (Barlow et al., 2020; Stark and Hester, 2019) and various forms of exploitation²¹ have been regarded as worrying trends in recent years for policing. Exploiting vulnerable people has been a growing issue towards being targeted as part of wider crime groups, such as being involved in drug running, a

²¹ There are various forms of criminal exploitation. There are perhaps too many to offer the topic any service in the confines of this thesis. The key subject areas include child criminal exploitation (Stone, 2018), ‘cuckooing’ (Spicer et al., 2019), human trafficking (Villacampa and Torres, 2019), modern slavery (Wood, 2020), labour exploitation (Byre and Smith, 2016), and ‘sextortion’ (O’Malley and Holt, 2020).

common feature in the topical 'county lines' debates (Windle et al., 2020; Moyle, 2019; Robinson et al., 2019). This also leads vulnerable people to transition from victim to offender (Plummer and Cossins, 2018). Whilst this thesis does not focus on the vulnerability of offenders, it recognises that there is scope for further research in this area, particularly in regard to how vulnerability can lead to offending behaviour.

Exposure to criminality has been a staple part of criminological research. Such exposure through criminal associations or familial hereditary was a factor in the Troubled Families programme: the aim being to break generational cycles of criminal propensity and public service demand (Crossley, 2018). This also opened up discussions amongst the group regarding factors that may influence such behaviours. Participants discussed a few familial and home factors that can lead to or develop vulnerability, such as "children with 4+ adverse childhood experiences [ACE]", "ACE factors and an absence of resilience" and "children of vulnerable people". Research into ACE factors highlight how adolescent trauma may contribute to vulnerabilities that have an adverse impact on health in later life (Boullier and Blair, 2018; Chapman et al., 2004), and sometimes influencing criminal behaviour or susceptibility in being a victim (McManus et al., 2018; Fox et al., 2015). Ultimately, the research around ACEs and early adolescent trauma reinforced the need for policing to work in partnership with agencies that can offer specialist support: skills and experience that the police do not have.

Summary of key findings for questions 1 and 2

The participants were in general agreement that vulnerability can be many things, and can be confusing, particularly from a policing perspective. The findings from this thesis mirrored that of existing literature. Key findings for this thesis show that vulnerability is heavily influenced by situational context of vulnerability, a point that is central to the College of Policing (2020b, p. 9) definition of vulnerability: vulnerability is "a result of their situation or circumstances". The focus group also found that practitioners considered that there are a range of factors and attributes that can influence the prevalence of vulnerability. It was a clear finding that victimisation (including repeat victimisation) were significant areas of vulnerability that the practitioners were exposed to. Further to this, the findings suggest that offending behaviour can result from vulnerabilities, and this can also come from exploitation.

This chapter will now move on to explore the findings from the next two focus group questions.

Question 3 and 4: why should we police vulnerability and how should the police do it?

The aim of questions 3 and 4 was to explore the participants knowledge and experiences of vulnerability and policing practices. These questions did not assume that the police should automatically respond to vulnerability and there was some discussion about whether the police should actually be involved in dealing with vulnerability. Once the participants had established what they considered vulnerability to be they moved on to discuss the police response to vulnerability and vulnerable people. However, the participants were in agreement that the effects of vulnerability per se were often cause for police attendance. The 3rd question, why should we police vulnerability, provoked a discussion amongst practitioners that naturally led into question 4. Additionally, it generated some debate regarding whether or not the police should be concerned with vulnerability at all.

Initially, the participants promoted the police ideals that embodied Sir Robert Peel's vision of the original police force (Reiner, 2010). They noted that the police should be involved in supporting vulnerable people as the police were there for the purposes of "protecting the public from harm", "keeping the public safe", "preventing crisis" and "because it is the police core business": all of which fall in line with Sir Robert Peel's early vision of the new national police force. These comments also lament later literature that acknowledges the changing role of policing to incorporate new approaches to reduce harm and prevent people reaching crisis (Asquith et al., 2017; Wood and Beierschmitt, 2014; Goldstein 1979). As one participant noted a reason why they should police vulnerability: "[for] all sorts of reasons: to prevent vulnerability and ensure better outcomes for everyone". Identifying vulnerability should be about influencing future outcomes. This thesis posits that identifying vulnerability should be considered as a predictor of future harm and, as such, should result in action to reduce the risk of further harm. The thesis suggests that when using the term 'vulnerable', practitioners should be adding 'to', i.e., 'vulnerable to...'. This would reduce confusion and points towards specific needs of an individual, where those needs can only be supported outside of policing. This nudges policing more towards

collaboration with other agencies that can offer the necessary services to deal with vulnerability, e.g., mental health services.

Some participants challenged whether the police should do anything in regards vulnerability and that it was perhaps mainly a role for other services. One participant agreed with the general consensus about supporting vulnerable people but argued that “we shouldn’t always police it”. Another participant added that “[policing vulnerability] questions what is core business for the police”. This reinforced the idea of working in partnership to help reduce the demands of crisis caused by vulnerability. Wood and Beierschmitt (2014) argue that the police must avoid crisis intervention as it is neither efficient nor effective and many individuals are ‘repeat users’ of emergency services, which demonstrates that root causes are not being addressed. The term ‘repeat users’ refers to those individuals who are known to the emergency service (and sometimes to public services, such as social care or public health) due to their regular attendance for service. They are also referred to as ‘frequent flyers’ (Akins et al., 2016) or ‘problem patients’ (Malone, 1996). To counter a continued need for service, Wood and Beierschmitt (2014) recommend that the police and other agencies develop shared policies to improve public service intervention that reduces the chances of vulnerable people reaching crisis. One participant noted that policing needs “to prevent people reaching crisis point”. Similarly, Asquith and Bartkowiak-Théron (2017 p. 145-146) argue that the police are ‘public health interventionists’ and they “suggest that public, and social-ecological, models of health offer productive vehicles through which to consider the most effective approaches to managing vulnerability in policing”. Indeed, public health and police are intertwined as both regularly encounter the same vulnerable people and marginalised groups (Wood, 2020; van Dijk and Crofts, 2017). Participant views mirrored these literature findings as they argued that the police should deal with vulnerable people to “prevent cycle of problems, for example, problem families having problem children, or poor children becoming poor adults”. They also added that dealing with vulnerability in partnership with other agencies can help reduce repeat and related calls. One participant noted that multi-agency intervention can “[i]mprove people’s lives whilst reducing long term demand on the police”. This echoes the notion of problem-oriented policing and in true Goldstein fashion (Hinkle et al., 2020; Goldstein, 2018; 1979): “to deal with causes rather than symptoms”.

Research suggests that working in partnership with specialist services is essential for policing vulnerability effectively and this was discussed by the practitioners (Ratcliffe, 2021; Wood et al., 2021; Wood and Beierschmitt, 2014). It was noted that the police should work “with partners. Vulnerability cuts across all responsible authorities²². A victim doesn’t distinguish themselves and their needs by the agency”. Indeed, many vulnerable people are not always aware of what services are available or even how to access them, which may then mean they call the emergency services as a last resort (Mclean and Marshall, 2010). One participant said that there was a need to “flag up [those in need] to appropriate support services”. This was in contrast to another participant who suggested policing vulnerability “should be a mainstream approach – don’t specialise”. However, research suggests that the police do not necessarily have the right skills, knowledge, or experience for dealing with the many forms of vulnerability (Bartkowiak-Théron and Asquith, 2012a). There was more support for the police to work in partnership to tackle vulnerability as opposed to consider it as “a mainstream” response (Ratcliffe, 2021). Bartkowiak-Théron and Asquith (2012) and Ratcliffe (2021) argue that the police should direct vulnerable and marginalised groups to the right services to ensure that particular needs are met (Wood, J.D., 2020; Wood and Beierschmitt, 2014). A comment from one participant noted this was needed for “identification of potential issues where support may be required”. This supports the earlier thesis finding that identifying vulnerability should be about improving future outcomes for the individual.

Vulnerability cuts across all public services, and agencies must work in partnership to tackle a variety of complex issues, like vulnerability (Andrews, 2022; Atkinson et al., 2007; Atkinson et al., 2005). There is a tendency to work in silos and that this hampered any joined-up action across public service agents. As one participant commented on how the police should respond to vulnerability: “No silo working to avoid duplication, avoid gaps and be joined up”. Wood and Beierschmitt (2014) argue that the police need to move away from traditional responses to crime control

²² ‘Responsible authorities’ is a term given to key agencies that have a statutory duty under the Crime and Disorder Act 1998 to work in collaboration to prevent and reduce crime. The responsible authorities include local authorities, police, fire and rescue services, primary care trusts and probation services (Home Office, 2016).

and work with specialist services in order to meet demands and needs of those suffering the greatest harm. They recommend that this will have a positive impact on the demands on emergency services (Wood and Beierschmitt, 2014). For example, Wood and colleagues (2021) suggest that co-responder teams would improve support to those in greatest need, particularly those with mental health issues. They go on to suggest that there is an overreliance on policing to manage mental health issues and that alternatives to emergency service responses should be sought (Wood et al., 2021). This was recognised in the focus group with a practitioner noting that there needs to be a “focus on those at service recovery to protect escalation”. This led to a suggestion from another participant that this might be achieved through “early action, integrated teams with shared vision [on outcomes]”. They were referencing the trialling of policing teams working in integrated hubs, similar to Multi-Agency Safeguarding Hubs (MASH – see Shorrocks et al., 2019; Dunne and Finalay, 2016). This is being able to direct those in need to the right service as opposed to making a simple arrest, the latter being short-sighted and potentially making matters worse (Wood et al., 2021). This approach has been explored by the College of Policing as a means to improve policing and redirect vulnerable people away from the criminal justice system and into specialist services (Christmas and Srivastava, 2019).

There have been recognised barriers to the ideal of working in partnership (Andrews; 2022; Crawford and Cunningham, 2015). It was generally agreed by the practitioners that partnership working was the most effective approach to policing vulnerability but there were some issues that may hinder progress. One participant noted data sharing issues: “there is sensitivity – data protection is an issue (data protection to protect person not organisation)”. This opened up the discussion to data sharing and developing partnership intelligence. Key comments from the group included “Qualitative data is vital” as well as the requirement for “information re: current issues in a person’s life”, which supports earlier comments that vulnerability is situational. This also suggests the importance of information that is beyond police systems that do not record specifics about vulnerability or non-police related information. The development of partnership intelligence has been recognised as a means to improving service delivery (Kirby and Keay, 2021; Quarmby and Young, 2010). However, for some, data sharing was not necessarily an issue and one participant

noted “we [police] should pass information on or share information with partners whilst complying with DPA (data protection act)”. There were some responses from the 5th question that reaffirmed the requirement for partnership interaction. Participants added that the evidence-base for how to police vulnerability included “partnership knowledge and co-operation” as well as an understanding of “Partnership demand data e.g., NHS, partners data, local knowledge”.

Summary of key findings for questions 3 and 4

There were several discussions that linked question 3 and 4, particularly around the role of the police and the role of partner agencies and who takes primacy in cases of vulnerability. Key findings for this thesis are that identifying vulnerability could be used as a predictor for future harm for an individual. As such, policing should be considering their use of terminology and when discussing individuals being vulnerable, practitioners should be seeking an answer for *vulnerable to...what?* This links to another key finding in the thesis that the police require support from other agencies in tackling vulnerability. Importantly here, practitioners note that dealing with vulnerability is a primary aim of other agencies and information and intelligence sharing is essential for effective collaborations. However, this also means that there needs to be an appreciation of the demands and priorities of different agencies too.

Question 5: what evidence-base do we need?

The final question asked participants to identify what resources they need as a first responder when working with vulnerable people. It was surprising that the conversation returned to the first part of the focus group debate and participants questioned what vulnerability was and if the (police) organisation had an answer: “Do we actually agree on what vulnerability is?”. They went on to comment that there needs to be a “Consensus on what it [vulnerability] is” and added that they need support from “HMIC²³ reports, enquiries (such as the Goddard enquiry²⁴), and

²³ HMIC = Her Majesties Inspectorate of Constabularies. HMIC is a term that is still used in policing despite the organisation being changed to HMICFRS (Her Majesties Inspectorate of Constabularies and Fire and Rescue Services) that recognises its broader remit and responsibilities.

²⁴ See Burke (2015).

indicators to measure change.” It was also commented that there needs to be a “collective understanding of the ‘issues’, together with the knowledge of what support is available”. A strong theme here is that there needs to be a consensus as to what vulnerability is and how it might be measured, and this needs to include whose role it is to respond to it (Andrews, 2022). The practitioners remained confused and some suggested that if there were some performance indicators or measures of vulnerability then that may help focus or direct their attention. The practitioners felt that it was important to have “clear aims to establish a reliable measure” and be able to “set our purpose with regards to vulnerability and then collect data to measure and assess” impact. Higgins and Hales (2016) have stated that there has been an urgent need for police services to develop the evidence base about vulnerability and harm, including how to measure them and how to reduce them in a way that delivers demonstrable value for money.

However, performance monitoring can skew organisational behaviour (Guilfoyle, 2013) and this may not be productive if the right measures are not used (Hibberd, 2021). To reiterate earlier arguments, there needs to be a collective understanding of what issues are surrounding vulnerability, e.g., being able to determine who is vulnerable and if they should be offered support. This should include ways of measuring an appropriate response. It was noted that the practitioners needed to “identify risk factors” so that they could “identify those who are vulnerable and need intervention support”, and they added that “[w]e need evidence”. It was interesting that participants discussed the use of having an evidence-base.

Evidence-based policing (EBP) has been gaining traction in recent years following austerity (Sherman, 2013; Sherman, 1998). Evidence-based decision making is a means of moving away from anecdotes or opinion and towards using research-backed evidence to make better decisions (Lum and Koper, 2015). Using this approach can improve the efficiency and effectiveness of organisational and operational policing responses, i.e., doing the right things (Lum and Koper, 2017). Despite criticism that police forces do not routinely act on available research evidence, EBP and research can offer opportunities that develop police responses through understanding what works in a given situation – as well as what does not work too (Smith and Tilley, 2005; Bullock and Tilley, 2009; Sherman, 1998). This

thesis aims to do just that. The thesis also explores the collective experience of practitioner's and how this can shape research on vulnerability in a policing context. Indeed, one participant noted, "individual experience and knowing what works" is part of the required evidence to tackle vulnerability (Fleming and Rhodes, 2018; Pease and Roach, 2017). It was also noted by participants that the police need to have a wider impact on vulnerable groups and develop "evidence that we can deal with vulnerability on a wider, rather than individual, scale". To do this the participants noted they would need to understand "What works? What interventions make a difference?". This is where the College of Policing can play a pivotal role in developing their What Works website and supporting research to develop policing knowledge and policies with the aims of improving practice (Laycock, 2005). Practitioners wanted "evidence that change is possible", but this requires access to existing research or for more research to be commissioned on vulnerability. This thesis aims to support that evidence base.

Summary of key findings for question 5

Findings elicited through the final question can be broken down into four areas: firstly, a requirement for guidance that can be used to inform practice. Secondly, and linked to the first point, this thesis finds that there is a lack of an evidence base about what works in tackling vulnerability. Practitioners saw practical guidance as more beneficial than theories about vulnerability. The third finding is that practitioners were concerned with the lack of tangible measures that could be used to identify or categorise vulnerability. Finally, working in partnership was discussed further and was a recurrent theme throughout the focus group. Noakes and Wincup (2004, p. 82) note that focus groups can help "to gather contextual material" for research. That has certainly been the case here. Findings from the focus group validate the importance of using research to inform policing of vulnerability and through the College of Policing. This thesis aims to do exactly that.

Themes of vulnerability

The findings discussed above can be categorised under two broader themes: vulnerability as a concept and vulnerability as an operational issue²⁵. These two themes can be used to separate vulnerability from a theoretical construct through and how vulnerability can be operationalised in practice. Each theme will be discussed below.

Themes of vulnerability: the conceptual

This thesis found that frontline practitioners struggle with vulnerability as a concept. There has been significant discussion in the literature and in the focus group around the concept of vulnerability. It was clear from the focus group that the participants were preoccupied with having a specific definition. Given that police forces often adopt different definitions added to the confusion identified by participants (HMICFRS, 2015). Further, police staff need more direct evidence about what vulnerability is as a concept as they see the effects of crisis, but often do not label behaviours or attributes beyond common occurrences, for example dealing with mental health issues. Participants in the focus group mentioned that vulnerability was “at risk of being exposed to unnecessary harm”. This led to a further discussion about the use of the word’s “harm”, “risk” and “threat”, as all of them are often used interchangeably yet having different meanings. The terms ‘risk’ and ‘threat’ have been the focus of risk modelling to support operational policing but have not yet become a consistent approach within policing (Mulholland and Cole, 2021; Staniforth et al., 2019; Downen, 2017). There has been a greater reception in policing to the idea of defining and understanding harm in a policing context that has led to changes in how police prioritise and respond to crime (Sherman et al., 2020; Ashby, 2018; Sherman et al., 2016; Sherman, 2007). This suggests how an evidence base, developed from research, can influence police activity. One participant attempted to cover a variety of issues that obfuscate their understanding of vulnerability and why it

²⁵ ‘Operational’ as a policing term refers to police activity. Sometimes referred to as ‘tactical response’. Both terms are used interchangeably and refer to the day-to-day policing activity. It has been regarded as the continuous transition between a variety of activities, ranging from enforcement through to safeguarding individuals (Jansen et al., 2013).

is beyond policing alone to resolve: who is vulnerable? “Potentially anyone. But more often people or groups with a factor that impairs their ability to identify risk or threat (for example, mental health, age), and take action to avoid it manifesting in harm, cultural issues e.g., lack of awareness, drugs, alcohol dependency”. The main issue here is the provision of guidance for police staff that can visualise and explain difficult concepts and their relation to the policing agenda.

Themes of vulnerability: the operational

The first theme suggested that the police practitioners need guidance and frameworks to help drive activity. Ideally this will help manifest conceptual ideas into tangible guidance. Generally, the College of Policing offers policy support and Authorised Professional Practice (APP) guidance that is used to educate and support new and existing police staff²⁶. This does cover dealing with mental health (College of Policing, 2016) and includes references to ‘mental vulnerability’ (College of Policing, 2019b). However, there is very little else covered on vulnerability in this section of the College of Police guidance. One participant in the focus group suggested they should be “identifying triggers earlier – risk / vulnerability matrix?”. This comment raised idea of the potential need for a matrix (or scoring system) to help identify vulnerability or risk, as was mentioned by several participants during the focus group exercise. However, this would only *rank* vulnerability as opposed to identify it, which could fall into the trap of police officers losing discretion and decision-making due to a potential reliance on assessment frameworks (Greenfield and Paoli, 2022; Mulholland and Cole, 2021; Cox et al., 2017). Clearly, there has been a dearth of operational direction for police staff responsible for dealing with and managing vulnerable people. Despite there being a growing body of academic research, there remains a gap in the translation of this research into applied practice. This thesis finds that police practitioners require more direction in understanding what is meant by vulnerability in order to focus their response. It highlights the potential use of measures, and this will be explored in the quantitative research.

²⁶ College of Policing Authorised Professional Practice provides content on key areas of policing practice. See <https://www.app.college.police.uk>

Chapter summary

Findings reflected on what has been documented in existing academic literature: the term vulnerability is not clearly defined, if at all and there was confusion as to what to expect from police managers. The groups agreed that this research would help redirect strategic policing more effectively. There was unanimous agreement that the term vulnerability (in a policing context) was difficult to explain. As such, the term was subjective and created confusion amongst practitioners, who provided different opinions as to what it was and how the police should respond to it. Practitioners explained there was a lack of strategic direction in relation to the concept and this affected the development of appropriate approaches, when responding to demand. During the discussions, practitioners highlighted they viewed their task as dealing with 'person(s) who require specialist attention or support'. Practitioners were unanimous in thinking anyone could be vulnerable, and this simple fact created confusion as to who should be targeted. Whilst practitioners said they saw assisting the most vulnerable as a core policing role, some pointed out that they felt they should not encroach on the role of other agencies. The practitioners also agreed on the two main topics that required further clarification: understanding vulnerability and how to police vulnerability. To reduce practitioner confusion, this thesis argues that using the term 'vulnerable' or 'vulnerability' is misleading. By simply adding 'to' after using the word 'vulnerable' practitioners can begin to make sense of problems and issues faced by those deemed vulnerable. This also suggests a predictive nature of vulnerability and suggests that those individuals are vulnerable *to* future harm, which policing and other agencies must collaborate on to mitigate and reduce the threat of harm.

Chapter 6: Findings from police recorded incident data

Aims of chapter

This chapter examines the police recorded incident data. It was the first police recorded data set explored in this thesis. The process for police forces in recording an incident is detailed in chapter 4, but to reiterate, an incident is the first point in which an event is recorded that follows on from a 'call for service' by anyone, either a member of the public or agency, i.e., social care (Brimicombe, 2016). Not all incidents require a policing response, and some incidents may be dealt with over the phone, but, where there is a notifiable requirement²⁷, a record of the event is made (Home Office, 2021; Gov.UK, 2011). There are specific rules that determine what is recorded as an incident and these are detailed in the National Standard for Incident Recording (NSIR) guidance (NPIA, 2011). Whilst there is guidance to direct the recording of incidents (along with a category of incident classes), incident records are not the most comprehensive and they can be subject to incomplete data (Brimicombe, 2016). Various fields of data are recorded by the police and the quality of this data can vary considerably in both consistency between different forces and internal consistency across incident records within the same force's own data (Brimicombe, 2016, p. 72; Brimicombe et al., 2007). Despite these challenges recorded incident data offers an insight into "all manner of events reported to the police where the public has cause for concern", e.g., missing persons, traffic incidents and antisocial behaviour, as well as crime.

This chapter will analyse a sample dataset of recorded incidents and explore its suitability to identify vulnerability. The chapter will first explore what is an incident and will consider how incident data may be used to assess the myriad of reasons why someone contacts the police in the first place (Gillooly, 2020; Júnior and Muniz, 2006; Bittner, 1974). This will provide a baseline of key areas of demand that the police face and allow the assessment of how much demand is related to potential vulnerability (Boulton et al., 2017). Findings from the focus group showed that

²⁷ Refers to 'notifiable requirement' that must be recorded in accordance with the Home Office counting rules (Home Office, 2021). See also chapter 4: using police recorded data for research.

practitioners sought measures of vulnerability that might be helpful for operational matters. As recorded incidents are the first notification of events that are of interest to the police, it would be reasonable to assume that this data may have some measure of vulnerability. The chapter will then draw a conclusion regarding the suitability of incident recording in relation to vulnerability and if it can meet practitioner demands.

What is an incident?

To remind the reader, an incident is “a single distinct event or occurrence which disturbs an individual’s, group’s or community’s quality of life or causes them concern” (NPIA, 2011, p. 4). The purpose of incident recording is explained by the National Police Improvement Agency or NPIA²⁸ (2011, p. 3) as being a risk assessment applied to a call for service to determine an appropriate policing response (or if one is required at all):

“The principal aim of NSIR [National Standard of Incident Recording] is to ensure that incidents are risk assessed at the earliest opportunity leading to an appropriate response as well as being recorded in a consistent and accurate manner to help the police and local communities tackle anti-social behaviour (ASB) and other issues.”

Incidents can range from anti-social behaviour issues through to traffic issues or any matter of public safety and are recorded based on a list of categories set out in the National Incident Category List²⁹. However, not all recorded incidents involve crimes and therefore the police record a range of issues of what is affecting local communities (Brimicombe, 2016). It has been argued that recorded crime statistics do not take into account low-level disorder and anti-social behaviour, such as noise nuisance or drunken behaviour (York, 2006). Indeed, the everyday concerns of the public “are related primarily to anti-social behaviour” and many issues that impact on

²⁸ The National Police Improvement Agency (NPIA) has been rebranded as The College of Policing.

²⁹ The National Incident Category List (or NICL) is contained in the NPIAs National Standard for Incident Recording guidance (NPIA, 2011).

communities are not always reflected in crime statistics (York, 2006, p. 17; Punch and Naylor, 1973). However, these issues often appear in recorded incident data. Therefore, wider data and information is essential for identifying non-crime related issues that impact on communities but are also reasons why people contact the police (Weisburd and White, 2019). As incident recording can capture information regarding the wider nature of why people contact the police, there is potential to identify a range of vulnerable people or events containing some level of vulnerability.

Recorded incidents and vulnerable markers

As detailed in chapter 4, there are several markers that can be added to recorded incidents by police call handlers (Simpson, 2021). These markers are referred to as a 'qualifier' in the NPIA guidance (2011), and therefore referred to herein. There are 4 qualifiers used on incident data that can flag it as relating to some form of vulnerability: mental health (MH), vulnerable child (VC), vulnerable person (VP) and vulnerability (VU). It is worth noting that the vulnerability qualifiers in all these cases are not based on any evidence (empirical, academic or policy), nor is any specific training given to call handlers in identifying, understanding, or addressing vulnerability (Brimicombe, 2007). More than one qualifier can be added to a single incident. Incident data and any additional qualifiers are recorded by the call handler based on the call handler's interpretation of the call details. Despite there being no training in identifying vulnerability, Gillooly (2020) found that improved training and knowledge for call handlers can improve the policing response by developing appropriate knowledge at the point of the initial call. Guilfoyle (2013) supports the notion of improving a policing response through a 'system's thinking' approach, in which he argues that police demand can be positively managed at the first port of entry. Through improved call handling, calls for assistance can be risk assessed and directed for an appropriate response (Guilfoyle, 2013; Cromdal et al., 2008). Therefore, through appropriate assessment of the initial call, there is an opportunity to have a positive impact on the subsequent demand on police resourcing, and the identification of vulnerable events or vulnerable people. Recorded incidents are of importance in this research as they offer the first form of recorded information in relation to calls for assistance. The call handler has been regarded as a 'gatekeeper' (Neusteter et al., 2019) and they can determine what the police respond to.

Recorded incident data sample

The data sample used for analysis was for all recorded incidents for a full calendar year (1st January to 31st December) 2017. This data sample was taken from a UK police force where incidents are recorded on a data warehouse and logging system called STORM. Not all police forces in England and Wales use STORM, but all forces must adhere to the NSIR regardless of which IT system is employed. There is a 'front-end' service user interface that allows staff to examine recorded incident data, but this facility cannot process large data sets. Therefore, an SQL query³⁰ was written to extract a bulk data download from the data warehouse, which stores all the recorded STORM data (Jamison, 2003; Inmon, 1995). The bulk data download was extracted in CSV format and analysed within Microsoft Excel. The data contained a total of 572,749 cases, herein referred to as incidents. There was a total of 35,732 qualifiers across four different vulnerable classifications:

Table 6.1: The use of vulnerable qualifiers.

Vulnerable qualifier	count
Mental health (MH)	1,091
Vulnerable Person (VP)	12,826
Vulnerable Child (VC)	17,971
Vulnerable (VU)	3,844
Total	35,732

However, these were not all separate incidents. Some incidents contained more than one qualifier. To simplify the analysis all cases with one of the four qualifiers were marked as vulnerable. The number of incidents that were considered to be vulnerable, in the form of one of the four vulnerability qualifiers, was 28,048, which equates to 4.9% of all incidents. The rest of this chapter discusses this data set.

³⁰ A SQL (structured query language) query is used to extract data from a database table or a combination of linked (related) data tables within a SQL database (Jamison, 2003). The query is a means of questioning/ requesting data. Also refer to chapter 4 for more detail.

Table 6.2: List of recorded incident fields.

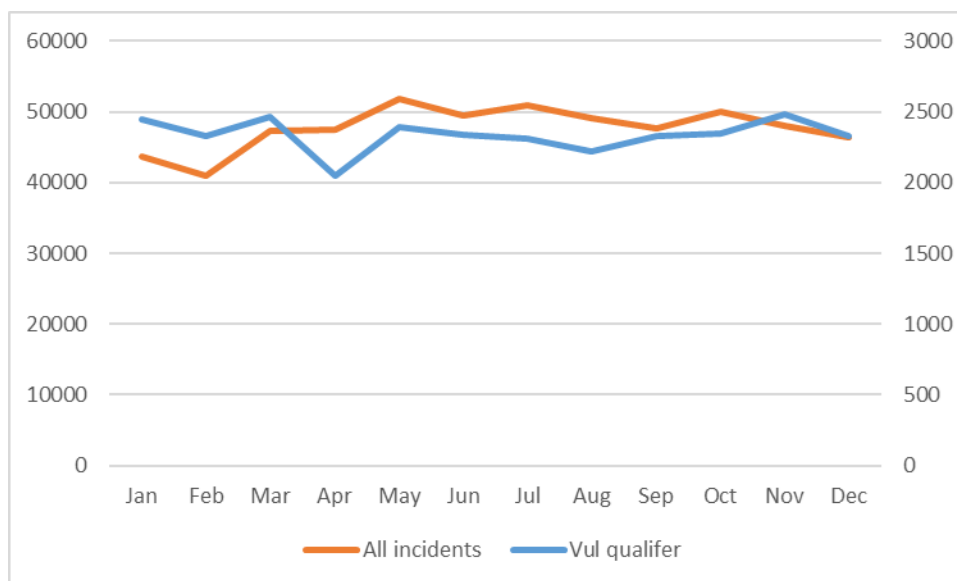
STORM field	Description	Storm field or created** field
ISR no	This is the unique incident reference number.	STORM
COMPL_ADDRESS	This is the complainant's (caller) address.	STORM
COMPL_FIRST_NAME	This is the complainant's (caller) first (given) name.	STORM
COMPL_LAST_NAME	This is the complainant's (caller) surname.	STORM
ID1	A created field of COMPL_FIRST_NAME and COMPL_LAST_NAME.	Created
caller	The type of caller, e.g., victim, witness, police staff, etc.	STORM
ID2	A created field of COMPL_FIRST_NAME, COMPL_LAST_NAME and caller.	Created
ID3	A created field from ID2. ID3 was only populated if the caller was classed as a 'victim'.	Created
ISR no SSMS	This was created to provide a list of incident numbers for further data extraction.	Created
Status 1 date	This contains the data and time of the incident.	STORM
date	This is created from the status 1 date field.	Created
time	This is created from the status 1 date field.	Created
hour	This is created from the status 1 date field.	Created
Day	This is created from the status 1 date field.	Created
date time attending	This is the date and time of police attendance at the incident scene.	STORM
date time at scene	This is the date and time of police arrival at the incident scene.	STORM
house no	This is the house number of where the incident occurred.	STORM
street name	This is the street name of where the incident occurred.	STORM
postcode	This is the postcode of where the incident occurred.	STORM
URN ADD ID	This is created from the house no, street name and postcode.	Created
district id	This is the district or local authority area where the incident occurred.	STORM
city	This is the town or city of where the incident occurred.	STORM
age	This is the age of the caller.	STORM
P_sex	This is the gender of the caller.	STORM
P_ethnic	This is the ethnic code of the caller.	STORM
p_race	This is the race of the caller.	STORM
p_qualifier	This provides details of any qualifiers attached to the case.	STORM
grade	This is the grade or prioritisation of the incident.	STORM
opening class	This is the opening class assigned to the incident.	STORM
closing class	This is the closing class of the incident following investigation.	STORM
origin of call	This is how the incident was received.	STORM
origin SPSS	This is the origin of the call recoded as a number for analysis.	Created
caller SPSS	This is the caller detail recoded as a number for analysis.	Created
count	Each case was given a count of 1 for analysis.	Created

** Pre-defined recoded data field (STORM) or 'created' by the researcher for analysis for this thesis.

Annual trend of recorded incidents

Previous research has identified that seasonality can affect crime rates and incident recording (McDowell et al., 2012; Rock et al., 2008; Baumer and Wright, 1996). The data was therefore analysed to explore whether any annual trends were apparent, such as during specific parts of the year, for example violent crime increases in summer months (McDowell et al., 2012). This analysis identified that there is a similar annual pattern for recorded incidents with and without any form of vulnerable qualifier (see chapter 4). This suggests that there is no significant time of year that may influence levels of vulnerability. Traditionally, there are increases in certain types of crime (e.g., burglary and violent crime) and anti-social behaviour during summer and school holidays (Hird and Ruparel, 2007). Incident data is shown in figure 6.1 (below). Due to the gap in the volume of recorded incidents with and without a vulnerable qualifier, figure 6.1 uses 2 axis: all incidents are displayed in relation to the left y axis and the vulnerable related incidents are displayed in relation to the right y axis. The annual trend shows a similar pattern between vulnerable related incidents and non-vulnerable related incidents. However, there was a drop in April (2017) of recorded incidents that contained a vulnerability qualifier, but this was shown to be not statistically significant. The main finding here is that the pattern of vulnerable related incidents followed that of the overall recorded incident trend.

Figure 2.1: Recorded incidents and vulnerable related incidents.



Opening class of incidents

The NSIR focusses on the 'opening class' of an incident, but the 'closing class' may differ should new information arise (NPIA, 2011). This is used for risk assessment and resource management, and the incident class may be changed during the time the log is kept open. This is based on information provided by the caller and an assessment is made by the call handler (Simpson, 2021; Gillooly, 2020). The closing class is used when further information is provided that warrant a change in the incident category, for example, the NPIA guidance suggests that:

“A report that someone has collapsed in the street may be opened as a ‘concern for safety’ but the injured party and another witness state there was a vehicle involved so the closure code will be under ‘Transport’”
(NPIA, 2011, p. 7).

The use of the opening class field gives a guide as to why people call the police for assistance. The closing class is a field within the same recorded event. Often there is little change in the 2 fields, which has been improved through recording standards applied by call handlers (Simpson, 2021).

The top 10 opening incident classes account for 63% (n=361,478) of all recorded incidents and can therefore give a rough guide to the majority of calls for service. The top 10 opening classes are shown in table 6.3 below:

Table 6.3: Top 10 opening class for all recorded incidents 2017.

	Class	Volume	%
1	Suspicious Circumstances	54,284	9%
2	Police Generated Resource Action	46,589	8%
3	Nuisance	43,455	8%
4	Concern For Safety	39,279	7%
5	Abandoned Call	34,471	6%
6	Warning Message	33,177	6%
7	Personal	31,187	5%
8	Theft	27,905	5%
9	Domestic Incident	26,000	5%
10	Assault	25,131	4%

The top 10 opening classes for all incidents (table 6.3) are similar to the top 10 opening classes for incidents with a vulnerable qualifier (table 6.4 - below), with 8 of the top 10 classes being the same. The opening class code for general incidents was slightly different to that of the opening class of incidents with a vulnerable qualifier. The qualifiers showed a similar pattern albeit with different proportions (as seen in table 6.4). This was more noticeable when the opening class of each qualifier was examined separately. The opening class for incidents with a mental health qualifier showed that almost half (46%, n=3,826) were for 'concern for safety' (these are often in relation to missing people). Concern for safety was also the top vulnerable related incidents. This class can include missing people which can consume significant demand on policing. The finding here is that police practitioners should consider this class as a potential measure for vulnerability.

Table 6.4: Opening class for all incidents and vulnerable-related incidents.

Top 10 opening class incidents with vulnerable maker	Incidents with VUL qualifier		All incidents	
Concern For Safety	8,435	30%	39,279	7%
Warning Message	4,876	17%	33,177	6%
Police Generated Resource Action	2,877	10%	46,589	8%
Domestic Incident	1,828	7%	26,000	5%
Personal	1,511	5%	31,187	5%
Suspicious Circumstances	1,458	5%	54,284	9%
Assault	1,425	5%	25,131	4%
Missing from home	713	3%	11,481	2%
Collapse Ill/ Injury/ Trap	643	2%	5,948	1%
Abandoned Call	446	2%	34,471	6%

There are four different qualifiers that can be attached to recorded incidents. More than one qualifier can be added to a recorded event. For the purposes of this analysis recorded events with at least one qualifier were regarded as being vulnerable. Examining the distribution of incidents in opening classes with the different vulnerable qualifiers there are some noticeable differences. Warning message and concern for safety incidents are the top two opening classes for all vulnerable qualifiers apart from cases with a mental health qualifier, which has concern for safety and suspicious circumstances as the top two classes. Incidents with a mental health qualifier (refer to appendix 2) show that concern for safety is almost double that of the other three vulnerable qualifiers and is just under half (46%, n=3,826) of all incidents with a mental health qualifier. It is also 4 times more than general incidents (7%). Police encounters with people with mental health issues is not uncommon (Mclean and Marshall, 2010). Punis and colleagues (2018, p. 5) have noted that dealing with mental health can account for up to a half of police incidents:

“Police officers routinely encounter people who are experiencing mental health crises. In the United Kingdom (UK), estimates of the proportion of

police incidents linked to mental health crises range from as little as 2% to nearly 50%”.

It has been argued that changes in mental health service provision has resulted in an increase in policing demand to deal with those in mental health crisis (McLean and Marshall, 2010). This has also been recognised in other western countries such as the USA (Wood and Watson, 2017), Canada (Boyd and Kerr, 2016; Shapiro et al., 2015) and Australia (Asquith and Bartkowiak-Théron, 2017).

Calls for service: who calls the police?

Calls for service to the police can be made by anybody, whether it be a member of the public, business or partnership organisation. Not all calls will be made by a victim or someone requesting service directly for themselves, for example, they may be calling on behalf of someone else or because they have observed an event that they believe should be reported (Gillooly, 2020; Brimicombe, 2016). Details of the type of caller is captured within a field recorded simply as ‘caller’. There were six categories in this field: victim, witness, third party, staff on duty, other agency and unknown. The victim as caller to the police constitutes the largest percentage of recorded incidents for both general incidents (40.3%, n=230,989 – see table 6.5) and vulnerable-related incidents (33.7%, n=9,451 – see table 6.6). When the caller is listed as ‘staff on duty’ the percentage of vulnerable-related incidents logged (25.8% - see table 6.6) are double that of non-vulnerable related incident logs (13.8% - see table 6.5). Furthermore, when the witness of incidents is the caller they are *less* likely to account for vulnerable-related incidents (10.7%, n=2,989) as opposed to general recorded incidents (19.7%, n=112,924). This category of caller has the lowest number of calls in relation to vulnerability.

Table 6.5: Caller details for all incidents.

Caller	Volume	Percent
Victim	230,989	40.3%
Witness	112,924	19.7%
Third party	97,505	17.0%
Staff on duty	78,983	13.8%
Other agency	51,261	8.9%
Unknown	1,087	0.2%
Total	572,749	100%

Table 6.6: Caller details for vulnerable-related incidents.

Caller	Volume	Percent
Victim	9,451	33.7%
Staff on duty	7,244	25.8%
Third party	5,286	18.8%
Other agency	3,074	11.0%
Witness	2,989	10.7%
Unknown	4	0.0%
Total	28,048	100%

Recorded incidents from 'the caller'

Only cases where the incident 'caller' field contained the status as 'victim' were used for further analysis of recorded incident data. This was influenced by the literature and comments from the focus group about victims being vulnerable. Additionally, the Victims' Code for Policing emphasises that the police should put the victim first in all investigations (College of Policing, 2021a). Concentrating on the victim ensured that the available data was directly related to the caller. This reduced the data sample to a total of 230,989 recorded incidents. Additionally, there were 14,951 cases where the place of offence was blank or missing, and a further 635 cases where the place of offence was classed as No Fixed Address (NFA). The blank incidents and the NFA incidents were removed from further analysis. Researchers are increasingly aware of the importance of places of crime and anti-social behaviour (Eck and Weisburd, 2015). By understanding the influence of 'place' police forces are able to

concentrate their resources to specific locations to impact on crime and disorder (Braga et al., 2019). In the case of this research, it was important to assess if location was a significant factor in relation to vulnerability, particularly as the focus group highlighted the importance of situational context, which includes location. The remaining data was then examined based on the place of the offence.

Victim as caller: location

Data quality is a significant issue in the recorded incident data sample, and this is a problem for policing in general (Brimicombe, 2016; Garner and Johnson, 2006). The data sample used in this thesis contained numerous spellings of the same locations. Therefore, the data was then reorganised by location to identify specific / unique locations and an additional field was created. This was recoded to create a new field within the data, referred to as URN ADD ID (unique reference number for address identification). The incident data showed that there was a total of 120,510 unique location cases. This contained 35,412 repeat case locations. This equates to 29.4% of locations being a repeatedly victimised location (based on the place of the offence as a unique reference point).

The next step was to examine the data sample based on the status of the caller field. The aim was to ascertain if the victim (as the caller) had any specific vulnerabilities that might be disclosed at the time of the call. To identify unique individuals a new field was created, which was coded as ID3. This field was created by concatenating 3 other fields: COMPL_FIRST_NAME (complainant (caller) first name), COMPL_LAST_NAME (complainant (caller) surname) and caller. This showed that from the total cases of 230,989 there were 15,752 missing cases and that there were 136,582 unique cases. There was a total of 31,869 repeat cases. This meant that 23.3% of individuals were repeat victims.

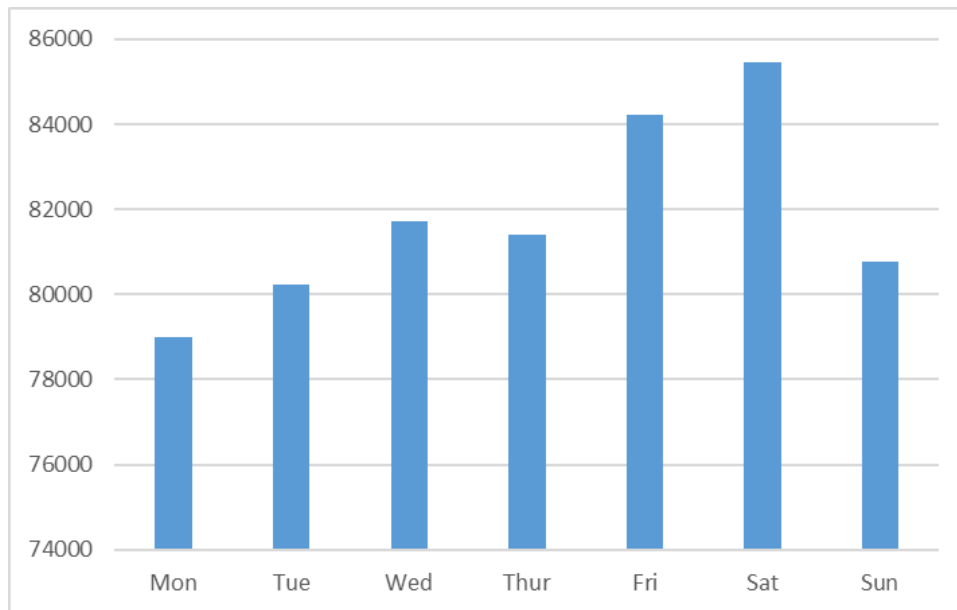
The targeting of repeat victimisation should be a key part of policing (Pease et al., 2018). The targeting of repeat victims and repeat victimised locations (along with repeat offenders) has been an essential element of problem-oriented policing (Goldstein, 1979; 1995). Sherman (2007) has argued that reducing the harm from crime can be improved by targeting the 'power few'. The power few being "the small percentage of places, victims, offenders, police officers or other units in any

distribution of crime or injustice which produces the greatest amount of harm” (2007, p. 299). Farrell and colleagues (2005) showed that internationally, repeat victimisation was as high as 40% in the International Crime Victims Survey (ICVS). However, Innes and Innes (2013) have shown that recorded incident data is difficult to analyse due to data quality and often misses repeat victimisation and issues involving vulnerability. Indeed, identifying the repeat victimisation rate using the sample of recorded incidents was only possible through the creation of new fields. It has been argued that repeat victimisation has dropped off the police radar despite it being of continued research interest (Pease et al., 2018). This thesis finds that police practitioners, and the literature, consider victimisation and repeat victimisation as a key category of vulnerability, and the first data set shows that nearly a quarter of victim callers are repeat victims. Repeat victimisation is an area of interest for identifying vulnerability.

Incidents and day of week

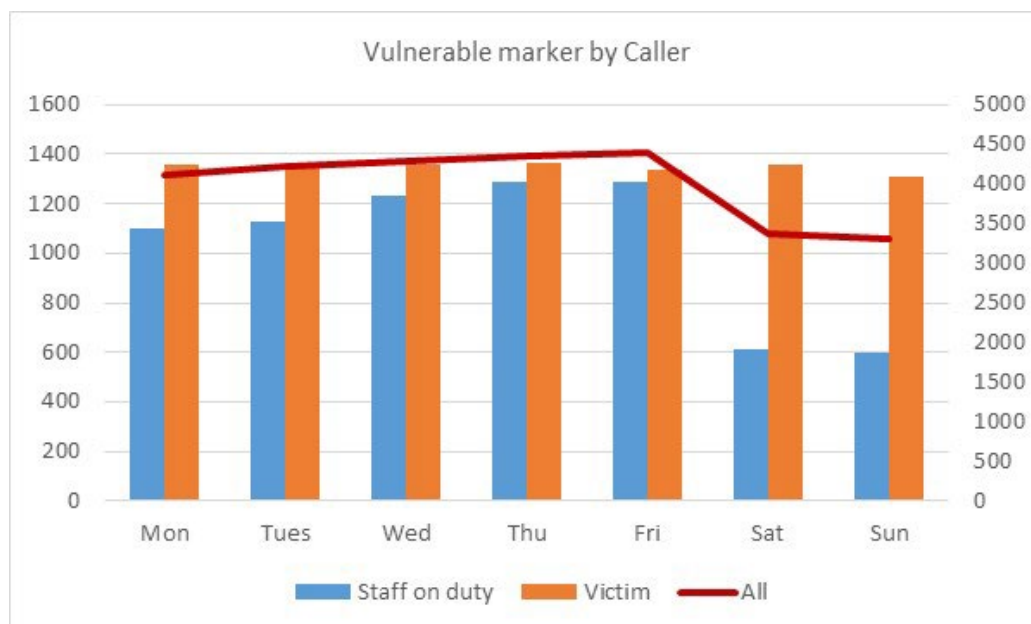
Routine activity theory is a widely cited approach to understanding the movement of offenders and crime patterns (Miró, 2014). It was pioneered by Cohen and Felson (1979) and the application of it has been used extensively in crime analysis (Santos, 2015). Cohen and Felson (1979) noted that offenders generally commit offences during their daily routines. This was further developed by Brantingham and Brantingham (1992) into crime pattern theory, which followed their discussions and development of environmental criminology (1981). Since then, spatial and temporal analysis of crime has become of increasing interest to criminologists and in policing research. It is important to assess the temporal distribution of incident data and examine if there is any influence on vulnerability. When examining the day of the week for recorded incidents the data shows that, in general, recorded incidents peak during Friday and Saturday, following a gradual build-up during the week. The peak day being Saturday (as shown in figure 6.2 below).

Figure 6.2: All recorded incidents by weekday.



The day of week pattern is somewhat different when examining vulnerable-related incidents. This thesis found that the general trend of recorded incidents with a vulnerable qualifier drops at the weekend on Saturday and Sunday. To understand this in more detail the data was examined by looking at the incidents reported by caller groups (see figure 6.3 over page). The data was broken down by incidents reported by victims against incidents reported by other caller classifications. When victims reported vulnerable-related incidents there is a consistent reporting of vulnerability across the 7-day week. However, vulnerable-related incidents reported by staff on duty show a drop in recorded incidents on Saturday and Sunday which accounts for the drop when the data is viewed together. Figure 6.3 (below) shows the difference in recorded vulnerable-related incidents that are reported by victims and by staff on duty.

Figure 6.3: Vulnerable-related incidents reported by staff and by victims.



The data was collapsed into two groups: one for staff reporting recorded incidents and one for all others (witnesses, victims, other agencies and third parties). The data was then separated into weekday recorded incidents and weekend recorded incidents. To determine if the two categorical fields were related a chi-square test was then performed (Rees, 1995). This showed that there was a significant association between the group reporting the incident and when (the day of week) it was recorded ($\chi^2(1, n=28,048) = 274.67, p < 0.01$). Therefore, staff are statistically less likely to report and record vulnerable-related incidents at weekends. This drop impacts on the weekly trend for all vulnerable-related incidents.

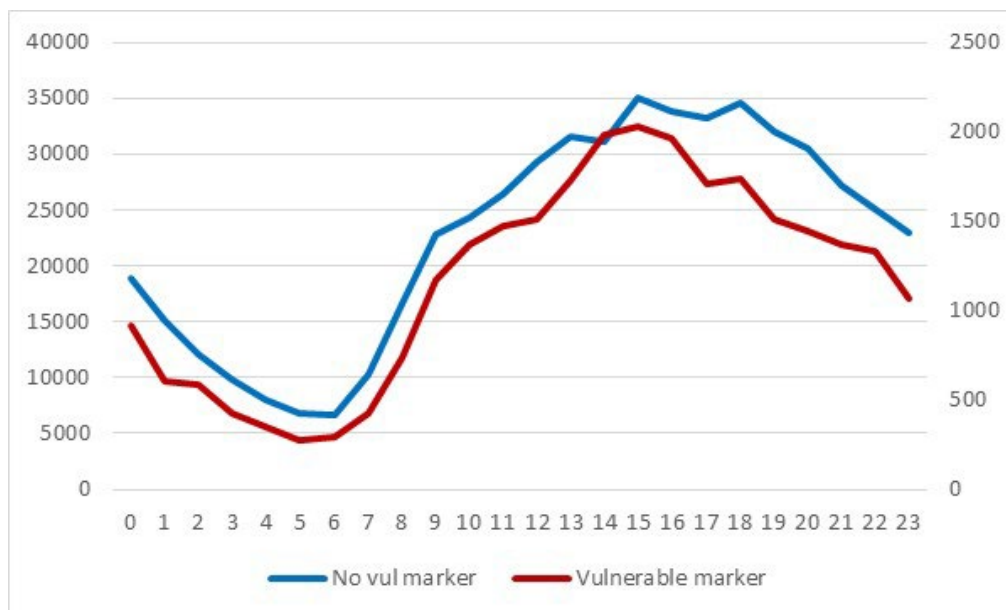
In relation to vulnerable victims, incidents occur routinely throughout the week and for staff reporting vulnerability, incidents drop at the weekend. There has been no identified literature that can provide an explanation of this finding. Therefore, this thesis can only make suggestions based on the literature used throughout this research: the change in day of week may be due to changes in service provision by providers who do not work at weekends, which results in reduced calls to the police (Puntis et al., 2018). Further, demands from violent crime and sexual assaults are reported more frequently over the weekend and this may impact on what is recorded and where police resources are consumed (Hewitt and Beauregard, 2014; Towers et

al., 2018; Malleson and Andresen, 2015). However, these are only hypotheses and as such, this represents a limitation but also an area for further research. A key finding for the thesis is that vulnerable victims are a consistent caller for service across the 7-day week.

Incidents and hour of day

The pattern for the recording of incidents by hour of day shows a similar trend for general recorded incidents and for vulnerable-related recorded incidents. Both groups of data show recorded incidents start to increase in volume from 7am. Vulnerable-related incidents then peak at 3pm before slowly reducing. All incidents peak at 3pm and then again at 7pm before reducing. Understanding the temporal spread of recorded incidents also falls under the theory of routine activities (Felson and Boba, 2010; Cohen and Felson, 1979). Incidents can cluster at busy times of the day when people move about and intersect, such as rush hour times or school finishing times (Clarke and Felson, 1993). The temporal spread on recorded incidents is shown in figure 6.4 (below) and suggests that the volume of incidents align to daily activities of people³¹.

Figure 6.4: All recorded incidents by hour of day.



³¹ The left axis refers to incidents with no vulnerable marker. The right axis refers to those with a vulnerable marker.

Day of week and hour

When the time is examined by day of week and by weekend a slightly different picture emerges in relation to the hour in which the recorded incident took place. Monday through to Thursday have the same pattern for all recorded incidents. The volume starts to rise after 7am and then peaks between 3pm and 6pm before the volume starts to tail off. Friday shows a rise from 7am that peaks at 3pm but a much slower decline until 11pm when the numbers drop off. On Saturday the calls start to rise from 7am and peak at 3pm but stay at a constant level until midnight before a slow tail off. Sunday shows a sharp rise from 7am with the volume peaking between 1pm and 6pm before trailing off, similar to mid-week. This suggests that recorded incidents have a slightly different pattern at weekends as opposed to general weekdays: the hours for demand are later in the day, usually late evening at weekends, which is supported by the notion of 'crime and everyday life', whereby much crime occurs during the daily patterns of living (Felson and Boba, 2010). Additionally, Felson and Poulson (2003) have noted that incidents vary by hour of day, which is based around the movements of an individual throughout the day.

Vulnerable-related incidents showed a similar pattern to Figure 6.4 (above) for weekday recorded vulnerability. However, recorded incidents on Saturday and Sunday showed a different temporal pattern. On Saturday the volume of incidents rose steadily from 10am until 5pm before a slight drop off until 7pm when the volume started to increase again until 10pm. There was also a peak in the early hours of Saturday morning at 2am, possibly a fall out from Friday night. The pattern on Sunday showed a steady rise in volume from 8am that peaked at 6pm and 10pm. There was a steady volume of demand between 3pm and 10pm with recorded numbers between 176 and 211 per hour during those 7 hours. Clearly, the day of week affects the volume of incidents by hour with weekends showing, as some would expect, to have the greatest demand. This thesis finds that patterns are similar for hours of day and day week for general incidents and vulnerable-related incidents, but they also match anticipated patterns of daily life (Newton and Felson, 2015; Felson and Boba, 2010).

Impact of the caller on recorded hour of day

Earlier in this chapter (figure 6.3) vulnerable-related recorded incidents were shown to drop significantly on Saturday and Sunday when the caller was listed as staff on duty as opposed to when the caller was the victim. The hour when these incidents were recorded was then examined. When looking at Saturday and Sunday’s data combined there is a consistent pattern for calls by the victim for both general recorded incidents and vulnerable-related incidents as can be seen in figure 6.5 below.

Figure 6.5: Recorded incidents by victim as caller (Saturday and Sunday).



When the same parameters are applied to the data when the caller was recorded as ‘staff on duty’ there is more fluctuation in relation to vulnerable-related recorded incidents. This can be seen in figure 6.6 below.

Figure 6.6: Recorded incidents by staff on duty as caller (Saturday and Sunday).



When the caller is the victim vulnerable-related recorded incidents continue to be recorded on a consistent level from noon until 10pm when they are at their peak. However, when the caller is listed as a ‘staff on duty’ vulnerable-related recorded incidents peak at 5pm and then drop but do show signs of a rise at 8pm and 11pm. The difference of reporting between ‘staff on duty’ and ‘victim’ suggests that the process for reporting and recording may influence the findings from the data (Garner and Johnson, 2006). When the victim makes the call for service, the call handler risk assesses the situation (Brimicombe, 2016; NPIA, 2011), but when the ‘staff on duty’ make the call for service they will be able to detail more situational knowledge, such as the type of incident in which they attended or have been deployed to or encountered during duty. Therefore, the discretion of the staff on duty may play a part in decision making and account for the difference (Aplin, 2021; Varano et al., 2009). Officer recording may also be affected by randomness of daily policing events, and this may account for the more sporadic temporal pattern, as individuals move through their daily activities (Brantingham and Brantingham, 2016; Felson and Boba, 2010). However, these are only suggestions inferred from the wider literature and it presents an area for future research. These findings lead this thesis to suggest that staff discretion and decision-making can influence the specific recording of vulnerable-related incidents.

Chapter summary

Recorded police incident data has several issues that can impede analysis (Brimicombe, 2016). The administrative nature of data recording (Hickman, 2014) means that the context in relation to vulnerability can be difficult to define or understand the true nature of the call for assistance (Brimicombe, 2007; Garner and Johnson, 2006). Police systems are more often designed to meet organisational requirements and national governance (NPIA, 2011) and not necessarily adaptable to service new strategic or research objectives, which can alter in a short space of time (Batts et al., 2012; Kelling and Moore, 1989). In this case the strategic objectives include 'safeguarding the most vulnerable' (removed f, 2018). The recorded incident data, as the first data set used in this thesis, does little to further much detail regarding the types of vulnerabilities and vulnerable people that require police assistance. However, despite the flaws in the data the findings from analysis suggest several areas that are of research interest. These will now be summarised.

The recorded incident data showed repeat victimisation for vulnerable callers is 23.3% and for repeat locations the rate is 29.4%. Repeat victimisation is a key theme within the literature (Pease et al., 2018; Farrell et al., 2005) and has been identified as significant within the recorded incident data. Repeat victimisation, whether it be in relation to the victim or the location, is a theme in which policing should be targeting (Sherman, 2007; Goldstein 1990; 1979). Problem-oriented policing, developed in the late 1970s, was specifically targeted towards repeat, related or recurring issues that cause significant harm within local communities (Goldstein, 1979). However, Innes and Innes (2013) have noted that vulnerability and repeat victimisation are often missed within incident recording, and the same has been identified here. Recorded data had to be recoded to explore victimisation. The thesis identifies this as a flaw in incident recording and can impede a police response to vulnerable victims.

Approximately one quarter of vulnerable related incidents involve repeat victims or repeat locations or a combination of both. Repeat victimisation can have a significant impact on victims and therefore, regardless of the data in which repeat victims could be identified, it should be a priority that police forces can and do response to repeat victimisation. Therefore, police forces need to ensure that data systems can identify

significant data sets at the earliest opportunity (Brimicombe, 2016; Innes and Innes, 2013).

Temporal analysis, e.g., day of week and time of day, is a fundamental aspect of crime and incident pattern analysis (Santos, 2014; Clarke and Eck, 2003). Research has suggested that weekends provide the most significant demand for police service (Andresen and Malleon, 2015; Newton and Hirschfield, 2009). Policing shift patterns are often designed to meet the greatest demand and are often directed towards busy periods or significant events (Boulton et al., 2017). Whilst this may be the case for certain crime types e.g., violent crime (Rock et al., 2008), the research for this thesis suggests that vulnerable people require service throughout the week. The recorded incident data shows that there is a consistency of reporting across the week from victims in relation to incidents with some form of vulnerable qualifier. This thesis suggests that there is a constant requirement to provide a consistent service by the police.

However, when staff report vulnerable related incidents there is a significant drop at weekends. This clearly stands out as vulnerable victims show no significant daily patterns. One suggestion is that this is linked to external service provision for vulnerable people (Boyd and Kerr, 2016). As some service providers do not provide weekend provision, this may account for the weekend drop-off (Mclean and Marshall, 2010). Another suggestion is that weekends generally create a significant demand workload for violent crime, which means that response policing is directed to areas regarded as having a greater priority (Andresen and Malleon, 2015). The third issue, and related to the day of week, is the time of day. Vulnerable related incidents peak at 3pm (with an additional peak at 5pm on weekends). The hourly spread of recorded incidents is in keeping with the wider literature and theories of routine activities (Felson and Boba, 2010; Cohen and Felson, 1979) and how these factors can influence temporal patterns of crime, anti-social behaviour and police demand (Brantingham and Brantingham, 2016; Brantingham and Brantingham, 1993).

Analysis of the recorded incident data has given an insight into how the police identify, define, and respond to vulnerability. The data helps to shape ideas about demand and supply of policing as a public service (Boulton et al., 2017). As a measure of vulnerability, vulnerable qualifiers offer minimal contextual information

that can direct police practitioners. The data suggests that vulnerability is not fixed at a specific point in time but is a constant issue for those requesting service, which can have a significant impact on police resourcing. The main finding from the recorded data is that vulnerability is a constant demand throughout the 7-day week and victimisation is difficult to assess due to recording standards. However, this is based on those that contact the police. There are several reasons why the police may not be contacted. In recent years, criminal behaviour by individual police officers and high-profile cases have questioned police legitimacy (Casey, 2023; Brantingham et al., 2022). These events have the potential to impact on calls from those in crisis who may no longer see the police as supportive. The thesis will now move on to discuss recorded crime data and explore how that can be used to understand vulnerability.

Chapter 7: Findings from police recorded crime data

Aims of chapter

This chapter is based on a sample of recorded crime data in relation to vulnerability. The recorded crime data set is the second data asset used in this thesis. As mentioned in chapter 4, a crime is recorded when a notifiable crime offence has occurred, which is then recorded by the police and reported to the Home Office (Home Office, 2021). As shown in the previous chapter, recorded incident data can be varied in content, but recorded crime data is generally more robust (e.g., there is more detail), which is due to recording practices and Home Office requirements (Brimicombe, 2016; Home Office, 2021; NPIA, 2011). The Home Office guidelines for crime data are more prescriptive for police forces due to the requirement for specific information to support crime investigation and publishing crime data statistics (Home Office, 2021). There are several Annual Data Requirements (ADR) that the police have a statutory responsibility to provide to the Home Office. These are used for the collation and publication of national statistics. There is also a need to capture more information to support crime investigations, victim support and bringing offenders to justice. All those areas require a minimum level of information (Home Office, 2021).

This chapter will explore how recorded crime could be used to identify vulnerability. It will also consider the significance of recorded crime for official data returns regarding crimes involving vulnerable people (Asquith and Bartkowiak-Théron, 2021). The chapter will first explore the theoretical concept of 'what is a crime' and how recorded crime statistics have been used in research (Tseloni and Duncan, 2022). This provides a baseline of how recorded crime can be used to develop knowledge of the nature and extent of crime, but also what the limitations of recorded crime are, which could have an impact on the research findings (Fox et al., 2006). The chapter will then discuss elements of the recorded crime sample to determine how recorded crime might be used to identify vulnerability and how it might support practitioner expectations for measures of vulnerability. This will include an assessment of the various data fields within recorded crime and how they might be present within the ecological approach (see chapter 9). This assessment has the potential to support

future decision-making regarding policy and practice over potential data collection regarding vulnerable individuals. The chapter will then draw a conclusion regarding the suitability of crime recording in relation to understanding vulnerability in a policing context.

What is a crime?

The nature of crime has been regarded as the most fundamental factor in criminological (Henry and Lanier, 2001) and sociological (Durkheim, cited in Henry and Lanier, 2001) studies. Durkheim argued that crime was necessary in holding society together through establishing boundaries by which citizens and communities lived (cited in Henry and Lanier, 2001, pp. 2-3). Morrison comments that “crime operates as a core concept in modern society” but argues the term is superficial and can mean different things to different people, not unlike vulnerability (Morrison, 2013, p. 3). Morrison (2013) further argues that the term requires boundaries and the Home Office define crimes for the purposes of data collection (Home Office, 2021). However, there are also wider philosophical stances with regards to crime as opposed to rules of recording them.

Henry (2013) suggests that the key elements in determining the nature of crime include social agreements, a societal response and harm, with the latter being the nature, severity and degree of harm suffered by the victim. Whereas Wikström (2010) considers crime as a specific moral action. Henry (2013, p. 86) also discusses comments by philosopher and social reformer Jeremy Bentham and writes that “Bentham declared that only harms to others should be criminal offences”, which would take **into** consideration the vulnerability to harm. Outside of these debates, crime, like vulnerability, has perhaps been a taken-for-granted term. It is not within the confines of this thesis to debate the nature of the meaning of crime. It is, however, important to raise the issue of crime as a harmful act that has an impact on victims, that was noted in the focus group. Many victims may not care much for the philosophical debates regarding what is a crime, and this will extend to incidents of ASB too. However, being the victim of crime or ASB can have an adverse impact on levels of victimisation and vulnerability.

It is only in the last few decades that there has been an increase in victimology: the studies of victims of crime (Shoham et al., 2010) and it is here where much of the current literature of vulnerability is focussed (see chapter 2 literature review). This is where there is perhaps an imbalance in the current understanding of vulnerability in relation to the actors in a crime setting: both offender and victim. In the context of current vulnerability research, it tends to be mostly focussed on victims and marginalised communities (Bartkowiak-Théron and Asquith, 2012b)³². Whereas research on offenders and vulnerability has primarily been on those who are already in the criminal justice system, and this has been focussed on the mental health of offenders (Dehaghani and Newman, 2017; Chitsabesan et al., 2006). Additionally, there are psychological studies that explore offending behaviour (Silver et al., 2008; Howitt, 2006). Hollin (1992) notes that psychology can play a part in criminal behaviour, but social variables and environmental factors have a significant impact on criminal behaviours. Environmental factors and situational context are key factors in crime pattern analysis for understand offending patterns (Clarke, 1995; Felson and Boba, 2010). Whilst criminological studies expand the lens of research beyond why offenders might commit crime (Liebling et al., 2017), there is growing research that points towards situational context being a key factor in determining vulnerability as noted earlier by this thesis.

Recorded crime statistics and hidden crime

Crime statistics can be used as an indicator of the level of criminal victimisation (Brennan, 2016). Whilst the reliability of recorded crime statistics is often under question (Maguire, 2012), Brennan notes that they serve “as a moral barometer” (2016, p. 155) as well as being “an important tool in the understanding of criminal victimisation and police performance” (2016, p. 157). Crime statistics are commonly used as a political statement and can be used to drive policing activity. Recorded crime or “crime counts” (Tseloni and Duncan, 2022, p. 61) and ADRs are used by the Office of National Statistics (ONS) to report nationally on levels of crime³³.

³² See also chapter 2: literature review.

³³ ONS publications are available at <https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice#publications>

However, understanding crime from the recorded data alone does not provide a full understanding of the actual volume or extent of a potential crime problem (Biderman and Reiss, 2017; Heiskanen, 2010) and this extends to vulnerability.

Many crimes go unreported or even unrecorded, including hate crime (Githens-Mazer and Lambert, 2010), violent crime (Wu et al., 2019), domestic abuse (Day et al., 2018), sexual assaults (Venema et al., 2021) and crimes against children and young people (Beckett and Warrington, 2014), all of which could be considered as crimes involving some degree of vulnerability (see chapter 2: literature review). Decker et al. (2019) also found in their race and gender inequality study that some victims did not contact the police due to fear of police discrimination. Unfortunately, recent high-profile police corruption and illegal behaviour will have intensified this (Casey, 2023; Brantingham et al., 2022; Helsby et al., 2018). The gap between recorded and experienced crime has been referred to as the 'dark figure of crime' (Biderman and Reiss, 2017; Jansson, 2007) and sometimes referred to as 'hidden crime' (Jupp, 2013). Understanding the dark figure of crime is not a new topic and there has been considerable interest in exploring this gap (van Dijk and Tseloni, 2012; Skogan, 1977; Biderman and Reiss, 1967). van Dijk and colleagues (2012) argue that the use of victimisation surveys help questions the value of police recorded crime and better understand what is required from police assistance, but this only helps develop ways of increasing reporting and recording. The British Crime Survey, or BCS, is a victimisation survey that collects data of self-reported crime by BCS survey participants (Hough and Mayhew, 1983). Comparisons between the BCS and police recorded crime has been one method used in estimating the dark figure of crime (van Dijk et al., 2012; Jansson, 2007). However, victimisation surveys have not been used by the police to help identify vulnerability. Therefore, a key starting point to identifying vulnerability will be through exploring recorded crime. Despite the criticisms regarding the value of recorded crime, understanding the harm caused by crime through analysis of recorded police data should not be overlooked (Lanier and Henry, 2001).

Recorded crime data sample

The data sample used for this chapter was for all recorded crime for a full calendar year (1st January to 31st December 2017). This data sample was taken from a UK

police force's crime recording system (as documented in chapter 4). The data extracted was on all victims of crime including those who had a vulnerable qualifier. During the year examined there was a total of 120,069 recorded crimes, which resulted in a total of 114,279 recorded crimes with at least one recorded victim in the sample³⁴. A qualifier for vulnerability (see chapter 4 on data provenance) was placed on 10.2% (n=11,648) of victims of crime. This qualifier was used as a dependent variable for statistical analysis (1 – present, 2 – not present).

Table 7.1: Vulnerable qualifiers and victims of crime.

Vulnerable	%	Not vulnerable	%	Total
11,648	10.2%	102,631	89.8%	114,279

This equates to a crime rate of 80.7 crimes per 1,000 population (compared to a rate of 83.8 in England and Wales (Statista, 2022)), a victim rate of 76.8 crimes per 1,000 population and a vulnerable victim rate of 7.8 crimes per 1,000 population. These rates are based on the approximate population of the area being 1.487 million³⁵.

Annual crime trend

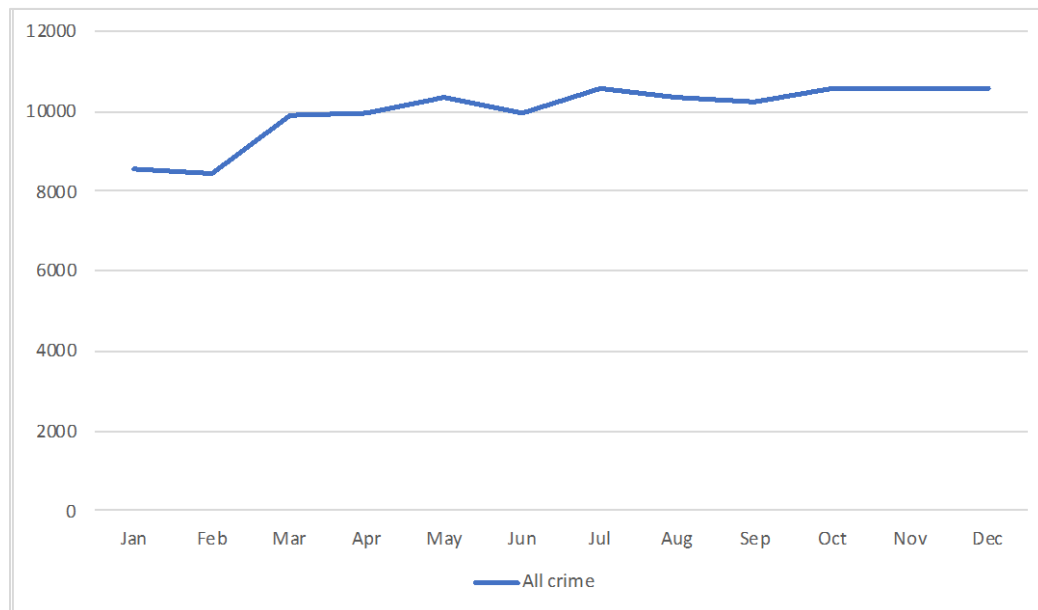
Understanding recorded annual crime trends has been a topic of academic debate for some time (van Dijk et al., 2012; McDowall and Loftin, 2009). As police forces are often heavily scrutinised for crime increases and decreases (Fox et al., 2006), attention towards the influence of recording practices has been cited as a reason for changes in levels of recorded crime (Caneppele and Aebi, 2019; Simmons et al., 2003). Over the last few years recorded crime levels have steadied, but the complexity (e.g., vulnerability) of crime has become a key area for police forces to explore. Annual crime trends tend to follow similar patterns, which are often

³⁴ Not all crimes contained victim details. Some of which were listed as crimes against the state.

³⁵ The area population data was taken from <https://datacommons.org/about> [actual location removed].

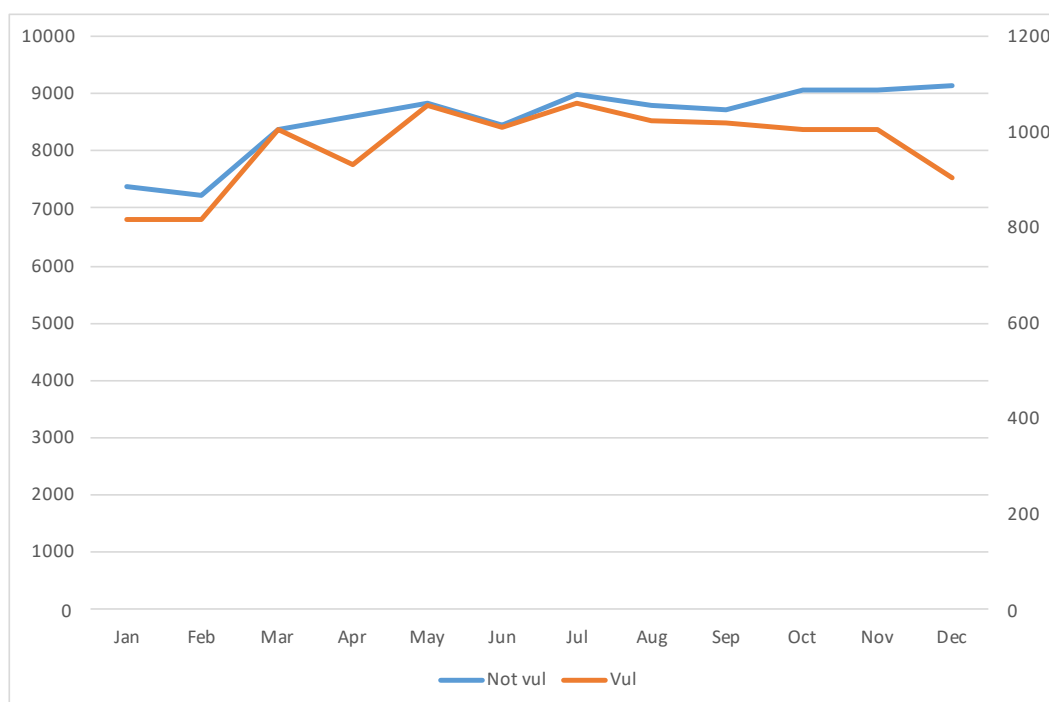
influenced by seasonality (Andresen and Malleson, 2013; McDowall et al., 2012). The figure below (figure 7.1) shows such a pattern.

Figure 7.1: Annual recorded crime trend for the area 2017.



The trend for recorded crimes with a person as a victim of recorded crime (with and without a vulnerable qualifier) shows a similar pattern to all recorded crime (see figure 7.2, below), which follows a seasonal pattern (Andresen and Malleson, 2013). When observing the trend of vulnerable victims and non-vulnerable victims, the only significant difference is during the month of December where there is a noticeable, but not statistically significant, drop in vulnerable related crime. This is in contrast with research that suggests certain crimes, including violent crime, increases in December (Andresen and Malleson, 2013; Cohn and Rotton, 2003). Attempting to explore this finding further highlights a gap in the literature regarding crime, vulnerability, and seasonality.

Figure 7.2: Annual victim trend with and without vulnerable qualifiers.³⁶



Vulnerable qualifiers were not available for use until April 2016 due to recording changes (Home Office, 2021). Further to this, crime recording processes also changed in 2018 as a new recording system was introduced into the police force used in this thesis. Therefore, analysis of longer trends has, frustratingly, not been possible. This clearly creates limitations for researching how vulnerability is identified over time, but also magnifies how recorded crime data is not necessarily an appropriate measure for vulnerability, and this is discussed further in the discussion chapter (chapter 10). However, despite this limitation the analysis of the data can be considered alongside the other data samples for assessing how the police identify vulnerability through their recording practices. The finding here is that vulnerable-related crime follows a similar pattern to overall crime – a similar finding to that of recorded incidents and vulnerable-related incidents.

³⁶ Due to the variance in volume, the left axis is for non-vulnerable victims of crime and the right axis is for vulnerable victims of crime.

Vulnerability and location

The importance of location in the commission of crime (and being a victim of crime) has grown in criminology since the 1970s (Braga et al., 2019; Brantingham and Brantingham, 2008; Weisburd, 2005). Understanding 'place' is a key cornerstone in routine activity theory (Cohen and Felson, 1979) and situational crime prevention theory too (Clarke, 1995). In criminology, the idea of 'place' explored new ideas in criminological research that was previously focussed on why offenders committed criminal acts (Brantingham and Brantingham, 1984). Research helped improve policing approaches to areas of high concentrations of crime, also referred to as hotspots (Braga et al., 2019; Eck et al., 2005) and it also showed that offenders did not travel far to commit crime (Ratcliffe, 2019; Wiles and Costello, 2000). Ratcliffe summarises crime hotspots as "places as small as individual buildings or street corners, blocks or clusters of a few streets, where crime is higher relative to the rest of the area" (2019, p. 116). Further research (Weisburd and White, 2019) has shown that hotspots for crime are also hotspots for health issues too. Weisburd and White have shown that "both physical and mental health problems are much more likely to be found on hot spot streets than streets with little crime" (2019, p. 154). They add that "it may be that hot spots of crime provide an avenue for more effectively and efficiently focusing health services" (2019, p. 154). Further to this, studies have shown social and economic inequality to be part of local indicators too (Kingston and Webster, 2015; Grover, 2013). Therefore, exploring location is an essential element of understanding where vulnerability may manifest and how the police may identify it.

There has been little research regarding where vulnerability (in a policing context) may, if at all, concentrate geographically. Indeed, situational context has previously been noted as a key factor in the commission of crime occurrence (Clarke, 2013; 1995; Cohen and Felson, 1979), but it has also been identified as a layer of vulnerability (Keay and Kirby, 2018; Luna, 2009). Collectively, this provides an insight into identifying potential locations of vulnerability that otherwise might have been missed as a consideration from police analysis of hotspots. It also offers the police an option to expand their analysis of crime locations to include wider issues than those that are crime related.

The recorded crime data sample contains more information on location than is recorded in incident data (see previous chapter). The crime data contains details of the victim's home address and a specific field called 'place of offence', which is where the crime is said to have occurred. The 'place of offence' field is further broken down into street, town and postcode. These fields are not completed separately but are automatically populated directly from the 'place of offence' field. Therefore, the data in these additional fields are only as good as the originating field (McCue, 2014). There was also a field for 'type of place' and this is coded with a number that corresponds to a type of place (see table 7.2 below). As an independent variable, this field allows the possibility of analysing the potential influence that the location might have, as it could be used to explore the interaction between crime, vulnerability, residential locations and public places (Cohen and Felson, 1979). However, due to possible bias introduced due to the extent of missing data, analysis of location was still conducted, but no inference should be made from this to the wider population of police reported crimes³⁷.

Using the variable of 'place' to test an association between places and vulnerability, analysis showed that vulnerable qualifiers were significantly more likely to be applied to victims being victimised in residential locations, $\chi^2(1, 15,458) = 175.479, p < 0.001$. Furthermore, victims who were victimised in residential locations were twice as likely to receive a vulnerable qualifier as those who were victimised in a public place. This analysis *suggested* that there was a relationship between crime, vulnerability, and place. Whilst this result shows a weak association due to the limited data, the literature would certainly support the notion that location can play a key role in victimisation and vulnerability (Braga et al., 2019; Weisburd and White, 2019;

³⁷ There were a large number missing (98,004 from a grand total of 114,279) that equated to 85%. This left a total of 16,275. Residential locations (care homes, HMO and residential) accounted for 16% (n=1,351) compared to public places which accounted for 8.5% (n=580). Little's MCAR test was run on the data to ascertain if the data was missing completely at random (MCAR). The output from the test was that the 'place' field is not MCAR. This suggests that there are issues with how the data is recorded. As the field is based on a code list, it is suggested that officers do not complete the records in full. This is clearly an area for further development but is outside the scope of this thesis. However, it will be a recommendation that the force explores how coded data is used and if there are opportunities to improve the efficiency in data capture and subsequent analysis.

Kingston and Webster, 2015; Grover, 2013; Eck et al., 2005). This thesis suggests that future research consider developing analysis of the location and vulnerability.

Table 7.2: Category of place from 'type of place' code.

Code	Place	Vul	Not Vul	Total
1	Business	46	1939	1985
2	Care Home (residential)	62	162	224
3	Education	40	308	348
4	HMO (residential)	57	261	318
5	Hotel	19	178	197
6	Licensed Premises	22	815	837
7	Medical	59	262	321
8	Other	28	789	817
9	Public Place	394	2725	3119
10	Residential (private homes)	1232	6877	8109
	Totals	1959	14316	16275

Location and gender³⁸

The next step in the geographic analysis was to examine gender as the dependant variable, against the location. To conduct this analysis, the location variable was recoded into two dichotomous variables: residential and public place (1 = residential location, 2 = public location). A chi-square test was used to explore if there was an association between the gender and location variable of 'place' (Rees, 1995).

Females accounted for 50% (n=3,432) of victims in residential locations where they were victimised, which is a consistent finding with the wider literature (Williams et al., 2020; Vrees, 2017; Kruttschnitt, 2016). This was compared to males who accounted for 37% (n=1,503) of victims in residential locations. Analysis of the data sample found that females were significantly more likely to be victimised in a residential location than males ($\chi^2(1, 10,991) = 160.311, p < 0.001$). When examining

³⁸ This section was based on the place variable and therefore findings are suggested. This analysis, whilst open to scrutiny, has remained in the thesis due to the volume of literature that supports the importance of place. Therefore, this remains in the thesis to prompt future research. For more details see footnote 36 (above).

victimisation in a public place, analysis found that males were significantly more likely to be victimised in public places (63%, n=2,514) than females (50%, n=3,502) (Newburn and Stanko, 2002). Ratcliffe (2019) also identifies that 'crime generators' are those locations to which large numbers of people are attracted, such as licensed premises, and this increases the risk of violent crime, which suggests why males are more likely to be vulnerable in public places (Kruttschnitt, 2013; Davies, 2011; Walklate, 2004).

In relation to vulnerable qualifiers, analysis found that vulnerable qualifiers were significantly more likely to be applied to victims being victimised in residential locations and victims in residential locations were twice as likely to receive a vulnerable qualifier as those in a public place. Further to this, it also suggests that police staff are inclined to regard victims targeted in residential locations are more likely to be vulnerable than those victimised in a public place, which suggests that officer perceptions of victims may be similar to Christie's 'ideal victim' (Christie, 1986).

*Location and Mosaic*³⁹

Areas of low-socioeconomic status has often been a feature of crime and place research (Kelly, 2000) with the term 'sink estates' being used as a derogatory term for poor deprived neighbourhoods that signify issues of worklessness, anti-social behaviour, welfare dependency and dysfunctional families (Slater, 2018). Further to this, socio-economic deprivation can have an adverse effect on health conditions and increase vulnerabilities (Finegan et al., 2020). Therefore, this led to an examination of the location and socio-economic status based on the post code of crime locations. The type of location (categorised as 'place', as in table 7.2 above) was analysed using the Mosaic profiling tool developed by the private business Experian (Experian, 2022).

³⁹ This analysis was based on post code data and was not subject to the previous issues of missing data.

Mosaic is a consumer classification tool that provides details regarding household demographics, lifestyle and consumer behaviour (Experian, 2022). According to Experian's Mosaic marketing material, Mosaic synthesizes "over 850 million pieces of information across 450 different data points and are condensed using the latest analytical techniques to identify 15 summary groups and 66 detailed types that are easy to interpret and understand" (Experian, 2019, p. 3). The Mosaic profiling tool uses a variety of data sets to create a category that denotes socio-economic status from those groups. Mosaic uses a grand index (the name of its main data base) that includes data from the 'indices of deprivation' (Gov.uk, 2019). The 'indices of deprivation' is a set of statistics regarding the relative deprivation of areas across England and these details are included within the Mosaic data. For the purposes of this research the Mosaic categories were collapsed into two groups: those that had a means of at least one standard deviation above the mean against those that were under one standard deviation from the mean for socio-economic status. The purpose was to identify and compare areas of wealth and areas of deprivation. There were 3 Mosaic categories⁴⁰ ('transient renters', 'family basics' and 'municipal challenge groups' (Experian, 2019, pp. 10-14)) that were at least 1 standard deviation above the mean, i.e., they had higher levels of deprivation. Using a Chi-Square test for association (Rees, 1995), statistical analysis showed that this new category was statistically more likely to be given a vulnerable qualifier. The odds ratio was that those living in the lower socio-economic band were 1.3 times more likely to get a vulnerable qualifier. Therefore, the thesis suggests that low socio-economic types were significantly more likely to get a vulnerable qualifier, but statistically this was as a weak association.

Gender and vulnerability

Gender is widely cited in research regarding victimisation (Shoham et al., 2010; Walklate, 2004) and there was a noticeable difference in the crime data sample regarding gender and vulnerability. Males accounted for 32.4% (n=37,057) of all

⁴⁰ For further details please refer to: Experian, 2019. Mosaic. Available at <https://www.experianintact.com/content/uk/documents/productSheets/MosaicConsumerUK.pdf> [accessed 18 February 2022].

victims and females accounted for 29.9% (n=34,136). When examining gender in relation to victims classed as vulnerable the split was quite different, which has been previously identified (Bricknell, 2016; Walklate, 2004). Males account for 25.3% (n=2,950) of vulnerable victims, whereas females accounted for 55.7% (n= 6,484) of vulnerable victims. Further analysis using chi-square to test the association between gender and the vulnerability qualifier showed that females were significantly more likely to receive a vulnerability qualifier than males, $\chi^2 (1, n=71,193) = 1881.838$, $p < 0.001$. These results equate to a ratio of females being 2.7 times more likely than males to receive a vulnerability qualifier when being recorded as a victim of crime. This is not unexpected and wider research has shown gender to be a key attribute in vulnerability (Bartkowiak-Théron and Asquith, 2012a; Walklate, 2011).

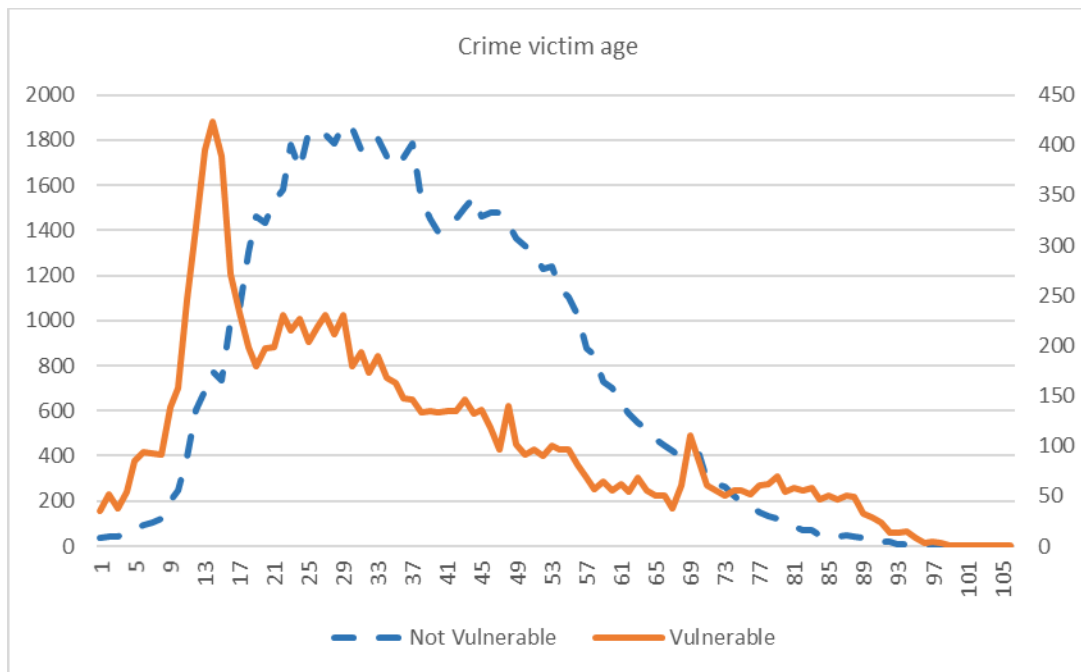
The findings in this thesis led the research to then explore the association between gender, vulnerability and domestic abuse. Following the findings from the analysis of gender and location it was hypothesised that females would be more likely to be victimised in residential locations due to domestic abuse (DA) (Di Cesare, 2014; Stark, 2012). The vulnerability qualifier was significantly more likely to be present if there was a DA qualifier (29.2%, n=3,670) compared to no DA qualifier (7.8%, n=7,950) ($\chi^2 (1, 114,134) = 5581.228$, $p < 0.001$). When examined as an odds ratio, it was found that victims were 4.8 times more likely to get a vulnerability qualifier if there was a DA qualifier present on the same case. This could be due to the officer perception of victims, which has been suggested previously (Williams et al., 2020; McKimmie et al., 2014; Page, 2008). This raises a question as to the validity of the vulnerability qualifier and crime recording (Ariel and Bland, 2019). The suggestion is that the vulnerability qualifier merely supports the requirement for specific attention to the case. Clearly, there is no doubt that vulnerability permeates through every DA case. The point in question is what value does the vulnerability qualifier add if vulnerability and victim support is already captured through the application of a DA qualifier on the crime record? This thesis suggests that there would be no detriment to victims if the vulnerability marker was not used at all.

Age, ethnicity and vulnerability

Age has long been considered a factor in relation to crime and vulnerability (Levasseur et al., 2021; Arora et al., 2015; Means, 2007). The first step was to view

the age data of vulnerable and non-vulnerable victims. This is shown in figure 7.3 (below). There are two axes on the table: the left axis refers to non-vulnerable victims and the right axis refers to vulnerable victims. Two axes were used due to the variation in count of cases. There is a visible peak in vulnerable related victims at age 14. These were predominantly related to sexual offences (n=179, 42.3%) and violent offences (n=177, 41.8%).

Figure 7.3: Crime victims and age⁴¹.



The use of chi-square to examine if there was an association between age and vulnerability suggested that whilst there was a normal distribution of vulnerability qualifiers evenly distributed across all groups, there was a weak association between the vulnerability qualifier and younger age groups. This was the same result when examining ethnicity and age. However, due to the automated generation of age by the crime recording system, there were a number of errors that highlighted flawed data. The age variable is generated from a date of birth field within the crime recording system and not manually input separately. When there is no date of birth field the crime recording system records an arbitrary date, which then generates an

⁴¹ The right axis is for 'not vulnerable'.

incorrect age. Therefore, the missing fields were removed and the log function in SPSS was used to normalise the data. An independent means test was then used to explore if age was a factor in the appearance of vulnerable markers. Based on the means test, the result suggest that older victims were more likely to be recorded as being vulnerable.

At this point it was decided that this would not be undertaken and would be considered a limitation of the research. However, this might be an option for future research, for example, Aihio and colleagues (2016) suggest discrepancies between individuals recorded as being vulnerable and those that self-report as vulnerable.

Repeat victimisation and vulnerability

Repeat victimisation can be a significant factor for vulnerability in a policing context. The literature highlights the significant impact that crime can have on those who suffer from repeat victimisation (Verdun-Jones and Rossiter, 2010; Farrell and Pease, 2008). Repeat victimisation can also be the cause of significant harm and create further vulnerabilities (Graham-Kevan et al., 2015; Verdun-Jones and Rossiter, 2010; Iganski, 2001). Therefore, exploring repeat victimisation and vulnerability is a logical step in the analysis of the recorded crime data sample. It was hypothesised that repeat victims were more likely to have a vulnerability qualifier than first time victims. However, this was not the case. Interestingly, non-repeat victims (12%, n=8,650) were 1.8 times more likely to receive a vulnerable qualifier than repeat victims ((7%, 2,937), $\chi^2(1, 113258) = 685.498, p < 0.001$). This result was not expected considering the wealth of literature regarding repeat victimisation and harm (Pease et al., 2018; Farrell and Pease, 2007; Farrell, 1992). It is unclear why this is not represented within the recorded crime data with vulnerability qualifiers and may be an issue with using recorded crime that may be an artificial method of identifying vulnerability (Fox et al., 2006).

It was surprising to find that repeat victims of crime were less likely to have a vulnerable marker (see chapter 7). This is intuitively perverse and in contrast with the literature (Farrell and Pease, 2008; Graham-Kevan et al., 2015; Verdun-Jones and Rossiter, 2010; Iganski, 2001). Therefore, the issue of repeats was revisited during analysis of the PVP referral data. The research explored if a group of victims were

recorded as vulnerable either by having a PVP referral or PVP referral and a crime vulnerability qualifier were more likely to be a repeat victim (the next section 'Linking data sets: PVP, incidents and crime' shows that crime victims with a vulnerable marker do not always have a PVP referral and vice versa). This involved creating a new variable in SPSS call 'combo'. The new variable, combo, was created using the 'Compute Variable' option⁴². After this the three variables of 1, 'vulnerable victim = yes', 2, 'PVP referral = yes' and 3, 'combo: vulnerable victim = yes AND PVP referral = yes') were tested against the repeat victim variable using a chi-square test. This showed that there was equal probability of victims with a PVP and victims with a PVP and vulnerable marker to be a repeat victim. As noted earlier, crime victims with just a vulnerable marker were less likely to be a repeat victim. This suggests that the PVP referral is more likely to be recorded against a repeat crime victim than the vulnerable marker alone.

There are possible explanations for this with the most obvious being the impact of the 'time-effect' window (Farrell et al., 2002). The time-effect window argues that there are limits on the data used and that the time parameters can greatly impact on research results. The recorded crime data sample is from one year and repeat victimisation for the sample was calculated from the sample only. Therefore, prior victimisation would not be included in the calculations for the repeat victim variable that was created for the analysis in this research (see chapter 4). Indeed, this is a limitation in this research. Future research would need to consider the impact of the time-effect window when examining repeat victimisation.

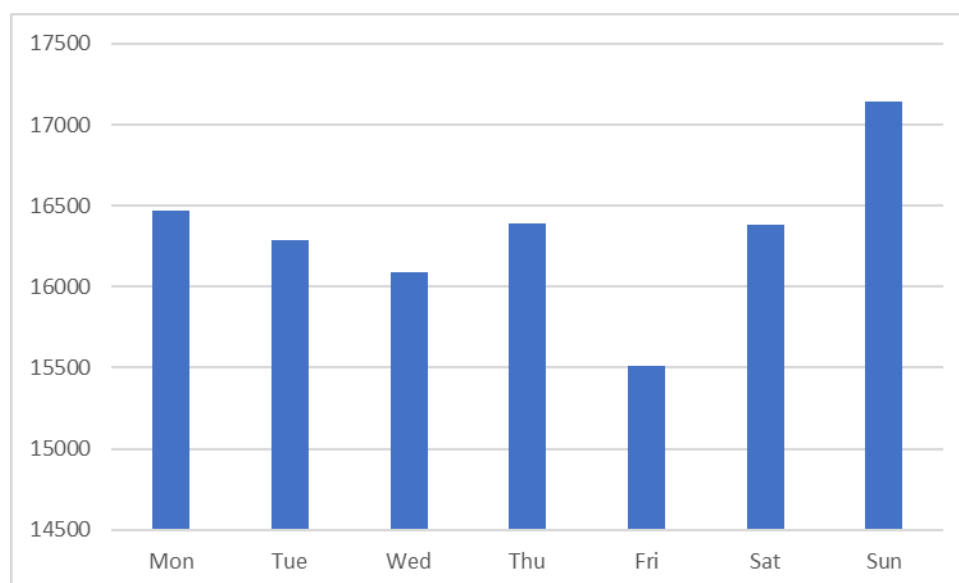
Crime and day of week

The day of week and crime is often categorised into weekday vs. weekend as a predictor of crime. This has been explored in numerous areas of research, including sexual crime (Hewitt and Beauregard, 2014), violent crime (Towers et al., 2018; Malleson and Andresen, 2015; Uittenbogaard and Ceccato, 2012; Nelson et al., 2001), and property crime (Yang et al., 2021; Andresen and Malleson, 2015;

⁴² The 'Compute Variable' option allowed the creation of a new variable (called 'combo') that was a combination of where the victim had a vulnerable marker and a PVP marker).

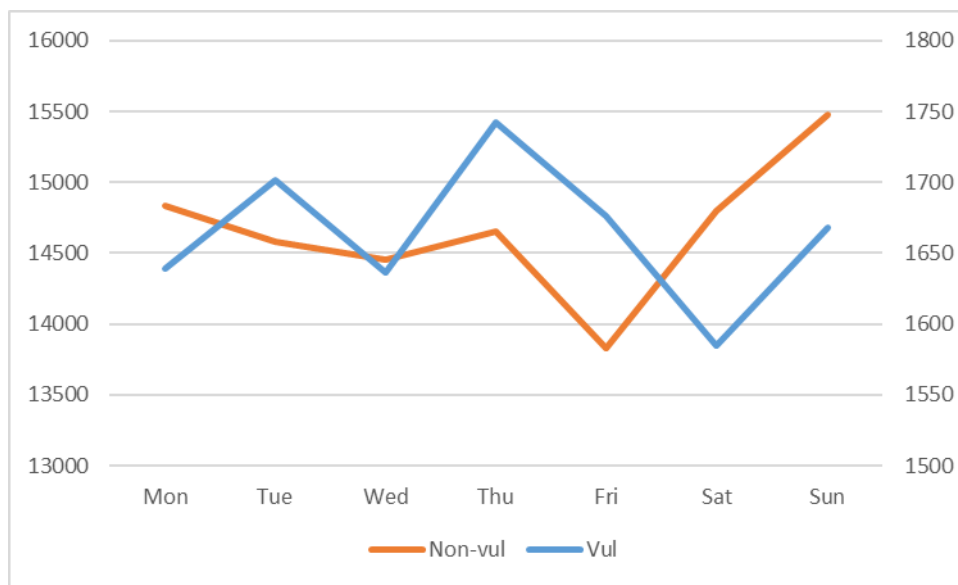
Uittenbogaard and Ceccato, 2012), with van Sleeuwen et al. (2021) covering temporal aspects of property crime only. However, analysis for this thesis showed that victims of crime were spread across the week. The day of week for recorded crime data sample was not as varied as seen in the recorded incident data sample (see chapter 6). Victims of crime, whether recorded as vulnerable or not, had an even spread throughout the week with the daily proportion of crimes being between 14% and 15% of the overall total. Sunday showed the largest daily count of victims of crime, which can be seen in figure 7.3 (below). This finding is in contrast with the findings from the recorded incident data. This may reflect the comments in the previous chapter that policing resources is focussed on specific crimes at weekends.

Figure 7.4: Day of week for all crime.



A chi-square test showed that there was no statistical significance in the daily pattern for vulnerable and non-vulnerable recorded victims of crime (this is shown in figure 7.4 below).

Figure 7.5: Recorded vulnerability by day.



A breakdown of recorded victims on a Sunday shows a different distribution of crime classifications, which suggest that the day of week may be a feature for victims of crime with a vulnerability qualifier. Victims with a vulnerable qualifier were more likely to be victims of sexual or violent crimes (71.8% of the total recorded), whilst non-vulnerable victims of crime were more likely victims of violent crime, criminal damage, or acquisitive crime. However, it should be noted that this is different to the findings from the recorded incident data in the previous chapter, which showed that calls for service were consistent across the week. This might support the suggestion that the type of crime skews the daily pattern, e.g., violent crime and sexual assault are more likely to receive a vulnerable qualifier on the crime and these crimes are more likely to occur over the weekend and reported on a Sunday (Andresen and Malleson, 2015).

Table 7.3: Crimes recorded on a Sunday.

HOC⁴³ crime group	Vul count	Vul %	Not vul count	Not vul %	Total
Criminal Damage and Arson	134	9.7%	1857	19.0%	1991
High Impact Acquisitive Crime	117	8.5%	823	8.4%	940
Other Acquisitive Offence	93	6.8%	1654	16.9%	1747
Other Crimes against Society	27	2.0%	232	2.4%	259
Sexual offence	191	13.9%	192	2.0%	383
Vehicle Crime	18	1.3%	964	9.9%	982
Violence against the person	797	57.9%	4047	41.4%	4844
Total	1377	100	9769	100	11,146

How vulnerability affects the state of investigations

The crime data includes details on the outcome of the crime investigation. Outcomes help explain how specific crimes have been resolved and the level of potential punishment. Therefore, by examining the progression of a criminal investigation it might show some interaction in the impact of the vulnerable qualifier. Victims of crime who are regarded as vulnerable should receive additional support going through the criminal justice system. Victim vulnerabilities as covered in the literature are still regarded in terms of traditional categories such as victims of hate crime (Roulstone et al., 2011), having mental health issues (Dickens and O'Shea, 2018), learning difficulties (King and Murphy, 2014), being old (Clarke et al., 1985) or even being young and having to cope with being in the CJS at an early age (Uggen and Wakefield, 2008). Research suggests that support and responses to vulnerability in this context are varied (Dehaghani and Newman, 2017; Asquith et al., 2016). Research has also extended to that of offenders who have been recognised as vulnerable (Parsons and Sherwood, 2016). However, police recorded crime data does not attach a vulnerability qualifier to offenders or suspects. There is no field within the data collected for this research to ascertain whether an offender is vulnerable. Therefore, it is not possible to examine offender and vulnerability status.

⁴³ HOC = Home Office Crime Classification.

Research has argued that vulnerabilities can be exacerbated when victims (and offenders) make their journey through the criminal justice system (Bartkowiak-Théron et al., 2017). Therefore, examining the state and the outcome of the crime may offer an insight into it, e.g., if vulnerable-related crimes have a different outcome than non-vulnerable related crime. The first step was to use a chi-square test to see if there was an association between variables in the data (Rees, 1995) and the variable of 'state' and 'outcome' were explored in relation to vulnerability.

Vulnerability and state of investigation.

The state of the investigation refers to where the crime investigation is up to and what sanction may be progressed. There were 5 state outcomes in the data: closed (1), court disposal (2), crime under active investigation (3), no further action (NFA) (4) and police disposal (5). The most significant state is court disposal, which means the case has been progressed to court for potential prosecution. A chi-square test of association was used to explore if there was an association between the state of the case and the vulnerability qualifier. There was a large statistically significant association, $\chi^2(4, n = 114,279) = 5423.580, p < .001, \phi_c = .218$ between vulnerability and state of investigation. Adjusted standardised residuals were used to interpret the association⁴⁴, where residuals greater than 1.96 indicate a greater than expected count to $p < .05$, and residuals lower than -1.96 indicate a lower than expected count to $p < .05$. This found that crime under active investigation (49.3), NFA (30.3), court disposals (27.1), and police disposal (2.0) were more likely to occur with vulnerable victims, in comparison to closed cases (60.6) which were more likely to occur in non-vulnerable victim cases. Whilst the results show statistical significance towards cases with a vulnerability qualifier, this is not surprising due to the types of crime that had a vulnerability qualifier, e.g., violent and sexual crimes, which are more likely to be progressed for a 'positive outcome'⁴⁵.

⁴⁴ Adjusted standardised residuals help direct the interpretation of the results where the table is larger than 2x2 (Agresti, 2002).

⁴⁵ A policing and CJS term which refers to sanctioned detections that include restorative justice outcomes (Callanan et al., n.d).

Vulnerability and case outcome.

The case outcome field gives the result of the crime investigation. It provides detail regarding the potential charges and CPS (Crown Prosecution Service) decisions, which will be determined based on the evidence gathered by the police. The data was grouped into similar categories for ease of statistical analysis and a chi-square test of association was used. There was a large statistically significant association, $\chi^2(7, n = 114,279) = 5512.329, p < .001, \phi_c = .220$ between vulnerability and case outcome. Again, adjusted standardised residuals were used to interpret the association. This found that missing (49.3), charged (27.6), difficulties (25.6), cautions (9.0), prosecution prevented (8.7) and evidential other (8.1) were all associated with vulnerable victims, in comparison to case closed (60.7) and community resolution (2.0) which were associated with non-vulnerable victim cases.

Similar to the findings in the analysis of the state of the crime, the outcome will be heavily determined by the type of crime, and therefore, serious violence and sexual offences will have been prioritised by the police for investigation. Henning and Feder (2005) noted that suspect and offence characteristics (e.g., type of offence) has an impact on court decisions, and clearly the more serious crimes are those that are progressed. In addition, these crimes also are more likely to have a vulnerable qualifier attached and this will have influenced the analysis of this test.

The tables below (table 7.4 and table 7.5) show the raw count of outcomes against the crime group for vulnerable and non-vulnerable recorded crimes.

Table 7.4: Outcome and HOC crime group for vulnerable victims.

HOC crime group	Missing records	Caution ⁴⁶	Case closed ⁴⁷	Charged ⁴⁸	Comm Resol ⁴⁹	Evident Dif ⁵⁰	Other ⁵¹	Prosec prevent ⁵²	Total
Criminal Damage and Arson	35	17	502	129	16	174	16	1	890
High Impact Acquisitive Crime	51	0	508	103	2	111	13	0	788
Other Acquisitive Offence	43	12	468	43	15	212	22	4	819
Other Crimes against Society	12	2	48	40	11	81	38	4	236
Sexual offence	512	9	271	123	12	678	109	53	1,767
Vehicle Crime	3	0	64	16	0	11	1	0	95
Violence against the person	291	139	583	1,075	203	2,127	327	94	4,839
Grand Total	947	179	2,444	1,529	259	3,394	526	156	9,434

Table 7.5: Outcome and HOC crime group for non-vulnerable victims.

HOC crime group	Missing records	Caution	Case closed	Charged	Comm Resol	Evident Dif	Other	Prosec prevent	Total
Criminal Damage and Arson	118	143	7,919	499	369	1,758	241	82	11,129
High Impact Acquisitive Crime	128	8	4,702	410	26	565	72	6	5,917
Other Acquisitive Offence	195	45	9,026	765	257	1,814	316	23	12,441
Other Crimes against Society	23	19	526	179	54	642	113	14	1,570
Sexual offence	259	11	397	110	15	692	163	51	1,698
Vehicle Crime	82	6	6,318	349	41	353	61	1	7,211
Violence against the person	409	435	4,950	1,931	927	11,293	1,446	401	21,793
Grand Total	1,214	667	33,838	4,243	1,689	17,117	2,412	578	61,759

⁴⁶ Caution includes: 'adult caution' and 'adult caution with alternate offence'.

⁴⁷ Case closed includes 2 reasons: 'no line of enquiry' and 'systems thinking principles applied'.

⁴⁸ Charged includes 2 categories: 'charge/summonsed' and 'charge/summonsed with alternate offence'.

⁴⁹ Community Resolution.

⁵⁰ Evidential difficulty includes 3 categories: 'evidential difficulties named suspect identified', 'evidential difficulties victim based – named suspect identified' and 'evidential difficulties victim based – named suspect not identified'.

⁵¹ Other included 9 classifications: 'formal action against the offender is not in the public interest (police decision)', 'named suspect – further investigation not in public interest', 'other agency delegations', 'Penalty Notice for Disorder', 'prosecution not in the public interest (CPS decision)', 'prosecution time limit expired', 'Taken into consideration', 'the offender has died' and 'youth caution'.

⁵² Prosecution prevented. There are 3 reasons this may be the case: 'names suspect identified but is below the age of criminal responsibility', 'names suspect identified but is too ill (physical or mental health) to proceed', or 'names suspect identified but victim or key witness is dead or too ill to give evidence'.

Chapter summary

In the literature review this thesis highlighted that only 20% of calls to the police were in relation to crime. Kirby (2020) noted that repeat callers to the police often suffered a variety of vulnerabilities, with many cases not being crime related. This suggests that recorded crime may not be the right measure for identifying vulnerability in police data. Shannon (2021) also noted that a wide variation in identification, recording and response to vulnerability was due to a failure in successfully identifying it at the first instance. Indeed, Fox et al. (2006) noted that recorded crime is not always fit for purpose. The findings from the analysis of the recorded crime sample here suggest that it is not the best source to identify vulnerability and there is a suggestion that vulnerability may be skewed to certain characteristics: females who are victims of violent or sexual crimes and victimised in private residential locations. That is not to say that they are not deserving of being recorded as vulnerable, but it does question when, how and to who vulnerable qualifiers are applied. Researching the use of Anti-Social Behaviour Orders (ASBOs), Brown (2017, p. 6) commented that official views of gender suggested “that anti-social men were generally seen as deviant and rebellious [and] young women were most often positioned as ‘vulnerable victims’”. The findings from this thesis do suggest that this may be true of how police officers perceive gender when responding to recorded crimes. Analysis of crime data in this chapter shows that vulnerability qualifiers are more likely to be present if the victim is female, in a residential location and has been subject to domestic abuse. There is some suggestion here that police officers are weighting decisions on vulnerability based on the type of victim and crime type (Christie, 1986). It should be noted, however, that these recorded vulnerable groups are still deserving of such recognition and further police support, but the recording of such should not flatten individual experiences and the police response should be tailored accordingly (Aliverti, 2020).

There may be a number of considerations for police decision-making which could be based on where police work and the type of crime they are constantly exposed to (Phillips and Sobol, 2012). Kahneman (2011) discusses two types of decision-making process for thinking in which system 1 makes decisions that are unconscious, intuitive and associative, and system 2 which considers things more

slowly, logically and in a calculated manner. People rely on system 1 for making quick decisions and this could be the source of a police officer's pre-disposed ideas. Kahneman also notes that this system of thinking cannot be turned off and automatically 'kicks in' in stressful or confrontational situations, which clearly fit within the sphere that police officers operate (Kahneman, 2011). Therefore, despite research evidence arguing that vulnerability comes in many forms, the police officer's instinct is determined by training and experience (Pease and Roach, 2017), but can be influenced by predisposed bias (Keren and Tieggen, 2004) and this may be another cause for their perception of victims (Lockwood and Prohaska, 2015; Page, 2008).

The suitability of recorded crime to record vulnerability also extends to ascertaining levels of repeat victimisation (Farrell, 1992). If repeat victimisation is a significant criminological insight (Skogan cited in Brady, 1996) then it should be a prominent feature in analysis of recorded crime. However, this is not the case and Pease and colleagues (2018) suggest that police forces are not doing enough to identify repeat victimisation. It could be that victim histories are not considered when vulnerable qualifiers are added to their recorded details as many recorded crimes are recorded as singular events (Aliverti, 2020). Yet, being a repeat victim of crime can increase vulnerability and harm (Graham-Kevan et al., 2015). This undermines the use of the vulnerable qualifier, especially when it is skewed towards females and may disregard others in need. Repeat victims are difficult to identify due to police recording systems and this has been considered a national issue (Brimicombe, 2018). Brimicombe noted that "the HMIC inspection looked at how each police force identifies repeat victims and how the data are recorded. Nearly one-third of police forces could not provide any data on repeat victims" (2018, p. 151). Based on the findings from this chapter and the previous one, this thesis argues that repeat victimisation should be considered a significant layer of vulnerability (Luna, 2009) and it is recommended that police forces revise data systems to more readily identify repeat victimisation and identify harm.

The aim of this chapter was to explore the recorded crime data sample in relation to vulnerability. Analysis of the data showed that victims of crime were 4.8 times more likely to have a vulnerability qualifier if there was also a DA qualifier present. This

seems evident based on the very factors included in each case. However, it also questions the requirement of an additional qualifier. If DA victims are more likely to be considered the most vulnerable of victims, does having an additional qualifier alter the level of service received? The police response prioritises the case due to the DA qualifier, not the vulnerable qualifier. Both qualifiers also trigger contact to the Victim Support Services, which is a duplication of effort. To complicate the identification of vulnerability, it is suggested that identifying repeat victimisation is clumsy and problematic with the recorded crime data and the vulnerable qualifier, which is on contrast with a wide range of literature (Graham-Kevan et al., 2015; Pease et al., 2018; Farrell, 1992). Whilst the thesis shows some interesting findings regarding crime and vulnerability, the overall conclusion is that this data set is, like the recorded incidents, inappropriate as a measure of vulnerability. The thesis now turns to explore the final data sample: protecting vulnerable people referrals and will assess if this data set can add more detail with regards vulnerable people.

Chapter 8: Findings from police recorded PVP data

Aims of chapter

This chapter explores recorded 'Protecting Vulnerable People' (PVP) referrals. PVP referral data is the third and final recorded data sample used for analysis in this thesis. Unlike the previous 2 data samples used in this thesis, PVP referrals do not necessarily relate to crime, disorder, or anti-social behaviour. PVP referrals provides information on potentially vulnerable people and where there may be safeguarding concerns for adults or children. Referrals are made by police officers during events they respond to (e.g., incidents or crimes) where they assess the situation as being caused by or having an element of vulnerability. The referral is a means to request further assessment by appropriate safeguarding agencies (e.g., social care) to identify vulnerability and for potential safeguarding measures (Shorrocks et al., 2019a). Once the officer has completed the PVP referral it is sent to a MASH (Multi-Agency Safeguarding Hub) where they are assessed⁵³ and directed to an appropriate service for further information or action (Jeyasingham, 2017). The introduction of MASHs has been regarded as an innovative response to tackling complex problems that were highlighted in serious case reviews (Henshall et al., 2013). The MASH units were first introduced in 2010 to improve information sharing and improve a coordinated partnership response to vulnerable individuals (Jeyasingham, 2017; Crawford and L'Hoiry, 2015; Bundred, 2006). The MASH is made up of staff from different agencies to help triage each referral and consider potential data sharing opportunities (Crockett et al., 2013; Golden et al., 2011) and improve service delivery to those in need (Fyson and Kitson, 2012).

This chapter will analyse a sample dataset of PVP referrals and explore their suitability to identify vulnerability in a policing context. It will also seek to explore the impact of the police working in partnership and what this means to identify and respond to vulnerability (Shorrocks et al., 2019a). The chapter will start with an explanation about what it means in policing to 'protect vulnerable people'. This will

⁵³ Assessment is usually undertaken by social workers who conduct an initial section 42 safeguarding enquiry. This is covered under the Care Act 2014 (Cooper and Bruin, 2017).

provide the background to explain its importance for analysis and why police forces are widening the scope of policing beyond enforcement (Millie, 2014). The chapter will discuss the theoretical concepts of identifying vulnerability through a referral process and the impact of agency terminology (Jeyasingham, 2017; Stevens and Gillam, 1998). It will then move on to discuss the findings from analysis of the PVP referral data and how it might be used to identify vulnerable people (Shorrocks et al., 2020). The chapter will finish with a discussion regarding the suitability of PVP referrals as a means of identifying and responding to vulnerability within a policing context.

What is ‘protecting vulnerable people’?

Police officers are often the first responder to many scenes of crisis that require more than a police response (Asquith and Bartkowiak-Théron, 2021). It is important that the responding officer is able to coordinate appropriate activity in response to the crisis and to this end it has been argued that police officers must be brokers of wider public services (Bartkowiak-Théron and Asquith, 2012b). This recognises that they might be able to direct those individuals in crisis into an appropriate treatment or service, as opposed to dealing with them through traditional methods, i.e., arrest/enforcement. Police services worldwide have recognised that policing, as a service, is not just about enforcement (Ratcliffe, 2021; Weisburd and White, 2019; Boulton et al., 2017; Wood and Beierschmitt, 2014; Schuller, 2013; Bartkowiak-Théron and Asquith, 2012a). There is a myriad of reasons why members of the public (and other agencies, including the volunteer sector) contact the police for assistance (Ratcliffe, 2021; Boulton et al., 2017). This can result in any number of reasons in which the police may then refer an individual through to the MASH, for example, child sexual exploitation or honour-based violence (Shorrocks et al., 2019b).

There are 21 different category codes⁵⁴ for a PVP referral and this gives an indication as to the variety of expected vulnerable events the police (and partner agencies) may encounter. The sample of recorded data only contains data for 19 of the 21 categories: two had not been used during the collection period for the data

⁵⁴ These codes are detailed in table 9.3: PVP referral reason ID codes and description.

sample used in this thesis. The two categories that did not feature in the data set are Clare's Law (ID 15)⁵⁵ and Information Only (ID 20) (see table 8.1, below). These two categories record a PVP referral for the purpose of not necessarily being assessed through the MASH, rather they are used to register information (and potential intelligence) that may be pertinent at a later stage, i.e., there is reason for concern, but there is no police authority or statutory responsibility to intervene at the time of the referral (Sanders and Young, 2012). Information regarding requests for previous offending (under 'Clare's law') is recorded as a PVP referral but does not necessarily result in a service assessment. Specifically, Clare's law involves disclosing information about an individual's history of domestic abuse to a new partner with a view to reducing the potential for future domestic abuse victimisation (Strickland, 2013). Clare's law provides a means for reducing future victim vulnerability and hence the requirement as a specific PVP category that can support safeguarding arrangements (Fitz-Gibbon and Walklate, 2017).

Additionally, previous issues of poor data management and data sharing has meant that the Home Office, in the Code of Practice on the Management of Police Information (NCPE, 2005b), set out the principles for police forces to improve data management and data sharing protocols. Data recording and data sharing have been recognised issues in both the UK (Wasik, 2006; Moss and Pease, 2004) and further afield, notably in the USA (Taylor and Russell, 2012). At this point it is also worth reminding the reader that recorded police data is mostly collected for administrative purposes and not research purposes (May, 2001) and this can impact on research findings as these may only be a reflection of what is recorded, not what is fully happening in local communities (Von Gunton et al., 2014). The suitability of recorded police data as an artefact for research will be explored in the discussion as a key finding from this research.

Police recorded data and data sharing is governed by MOPI (Management of Police Information). MOPI was introduced to improve police data sharing protocols and how

⁵⁵ The 'Clare's Law' category is the Domestic Violence Disclosure Scheme (DVDS). Under this scheme a person can request information regarding an individual's history of domestic violence (Strickland, 2013).

police forces managed their information, for example, what information could be stored and could be accessed (Sutton-Vale, 2022). This was in response to the Soham murders and the subsequent Bichard inquiry in 2005 (Bichard, 2004). The issues of data management and data sharing were highlighted within the Bichard report as a significant failing for policing, particularly within a partnership setting. It was these issues that led to a failure of police checks into the background of Ian Huntley's criminal behaviour (Dean and Gottschalk, 2007). A poor vetting process, insufficient data management and a lack of intelligence sharing allowed Huntley to secure work in a setting that gave him access to young people and ultimately led to the murders of two 10-year-old girls, Holly Wells and Jessica Chapman, in 2002 (Bichard, 2004). Moreover, a lack of information sharing has been a consistent issue for policing and the public sector (Dean and Gottschalk, 2007). MOPI guidelines have been developed and were introduced to overcome previous failings, improve data sharing for safeguarding and ensure that the risk of intelligence failure is reduced (James, 2016). The introduction of the MASH has been regarded as a good example of agencies working together to improve data sharing and intelligence development to help protect and safeguard vulnerable people (Shorrocks et al., 2019a; Shorrocks et al., 2019b).

Recorded PVP data sample

The PVP data sample used for this chapter is taken for the same period as the recorded incidents and recorded crime data sets: 1st January to 31st December 2017. The process for reporting and recording a PVP is outlined in chapter 4. The PVP data is recorded and stored on a system called SLEUTH. There is front-end access available for police staff that allows them to search PVP referrals, for example, as part of a case review. Front-end user access does not allow for bulk data downloads, such as that used in this thesis. The data extracted was on referrals recorded and contained details related to all the fields as shown in table 8.1 (below). The method for extracting this data sample was an SQL query that extracted data directly from the data warehouse that supports SLEUTH (see chapter 4 for further details). During the period examined there was a total of 57,981 individual PVP referrals.

Description of data fields

The extracted PVP data sample contained 26 unique fields of data: these are shown in table 8.1 below. The table also contains a description for each data field.

Table 8.1: PVP data fields extracted for analysis.

No.	Field name	Description of data field
1	PVP Reference	Unique reference number
2	Date event	Date of incident when referral made
3	Day event	Day of incident when referral made
4	Time event	Time of incident when referral made
5	hour	Date of referral if different to incident date
6	Referral Date	Description of the referral status
7	Status Description	Status of referral
8	Event Description	Main type of event (domestic abuse, adult or child referral)
9	Risk level Description	The level of risk associated with the referral
10	Local Authority Name	The local authority related to social care
11	Ethnicity	The ethnicity of the referral
12	Lead Referral	Forename of lead referral
13	Structured Name	Surname of lead referral
14	DoB	Date of birth for lead referral
15	Age	Age of lead referral
16	Gender	Gender of lead referral
17	Suspect	Suspect forename
18	StructuredName2	Suspect surname
19	GenderTypeDescription2	Gender of suspect
20	Crime Ref	Crime reference number if a crime has been recorded with the event
21	Crime Status	The status of the crime investigation
22	lloc	Incident location number (policing purpose)
23	Incident location address	The full address of the event
24	Easting	Mapping reference
25	Northing	Mapping reference
26-33	Ref Reason 1 - 8	The reasons for the referral broken down

There were 1,700 (2.93%) cases that were incomplete (recorded as 'NULL' in the data extraction). These cases were removed from the data sample prior to any

analysis or further descriptive statistics used in this chapter. The remaining data sample contained 56,282 individual PVP referral cases. The purpose of this analysis was to ascertain if the PVP referrals were a means of identifying potential vulnerability and not to provide a detailed analysis of the data.

PVP event description (primary reason)⁵⁶

The *event description* field is the primary reason for the PVP referral. There are three event descriptions for PVP referrals: domestic abuse (DA), vulnerable adult (VA) and vulnerable child (VC). The most common referral event in the sample was DA, which accounted for just over half of all referral events for a PVP referral (53%, n=29,813). It is worth noting that domestic abuse also featured as a key reason in the crime data for victim records to feature a vulnerability qualifier. Shorrocks and colleagues (2019b, p. 208) also found a high volume of PVP referrals being domestic-related and noted that “most referrals processed... related to DA”. They also noted that the primary focus for most MASH units is safeguarding vulnerable children (2019b). This thesis found that referrals for vulnerable children were just under a quarter of all referrals: VC (23.5%, n=13,226). This was the same for vulnerable adults (23.5%, n=13,243). Clearly, DA receives the most referrals. This thesis also found that DA qualifiers were also prevalent in the recorded crime sample.

In addition to the event description for the PVP referral, there is a risk factor⁵⁷ recorded in the referral data. The referring officer is responsible for assigning a risk factor and this is based on police guidelines that governs the baseline process time for each referral (Shorrocks et al., 2019b). When examining the risk factor, standard risk DA referrals accounted for roughly a quarter of all referrals (25.3%, n=14,221). This was the largest portion for referrals across all categories and all risks (see table 8.2).

Whilst the majority of all referrals were in relation to DA, the highest volume of high-risk referrals were for VC cases, which accounted for 8.8% (n=4,932) of all risk levels

⁵⁶ The event description field is field 8 as shown in Table 8.1: PVP data fields extracted for analysis.

⁵⁷ There are three risk factors: high risk, medium risk and standard risk.

across the 3 referral reasons. This was closely followed by high-risk DA (8.6%, n=4,843). VA had almost half the number of high-risk referrals (4.7%, n=2,622) compared to VC and DA. In total, high-risk referrals accounted for 22% (n=12,397) of all referrals (see table 8.2).

Table 8.2: Risk level and referral reason.

	High Risk		Medium Risk		Standard Risk		Total	
Domestic Abuse Referral	4,843	8.6%	10,749	19.1%	14,221	25.3%	29,813	53%
Vulnerable Adult Referral	2,622	4.7%	6,503	11.6%	4,118	7.3%	13,243	23.5%
Vulnerable Child Referral	4,932	8.8%	6,701	11.9%	1,593	2.8%	13,226	23.5%
Total	12,397	22.0%	23,953	42.6%	19,932	35.4%	56,282	100%

Referral reasons

The referral reason field states the description for the recorded referral. The next table (table 8.3, below) lists the various PVP referral reason identification (ID) codes and the general description for why the PVP has been recorded. Once the PVP has been recorded it is investigated by the MASH and the reason field will help determine which agencies may be involved in the subsequent investigation (Shorrocks et al., 2019b; Crockett et al., 2013). The descriptions are mostly related to crime categories. This thesis suggests that these descriptives narrow the focus of vulnerable-related referrals towards crime-only categories and does not allow for a wider appreciation of vulnerability, as noted by the focus group and in the literature.

Table 8.3: PVP referral reason ID codes and description.

VVP Referral Reason ID	Referral Description
1	Domestic Abuse (DA)
2	Physical abuse
3	Neglect
4	Sexual abuse
5	Forced Marriage
6	Honour Based Abuse
7	Death
8	Channel (a counter terrorism referral)
9	Missing From Home (MFH)
10	Child Sexual Exploitation (CSE)
11	Trafficking/ Slavery
12	Financial Abuse
13	Female Genital Mutilation (FGM)
14	Cyber Crime
15	Adult Care Home
16	External MARAC (Multi-Agency Risk Assessment Conference)
17	Child Protection (CP) Conference
18	Clare's Law (not used in the data sample)
19	Early Action ⁵⁸
20	Information Only (not used in the data sample)
21	Child sexual offender disclosure scheme (CSODS)

The number of reasons per referral ranged between 1 and 8 per referral. The most common primary referral reason for a PVP referral was DA (referral reason ID code 1) with 65.4% (n=31438) of referrals for domestic abuse, which is supported by research (Shorrocks et al., 2019a). A breakdown of the referral reasons can be found in appendix 5.

⁵⁸ Early action is a policing partnership intervention to halt the escalation of social problems. Boulton et al. (2017, p. 81) describe this as “Early Action is a multi-agency intervention at the earliest opportunity, delivering sustained solutions to individual and family problems, which is hoped ultimately to build social resilience and create thriving communities. Early Action applies to both children and adults and aims to reduce vulnerability, improve health and wellbeing, prevent crime and reduce demand across all public services, preventing problems rather than responding to them.”

PVP and gender

There was a total of 55,700 records used for analysis of gender. Some records were removed: in the gender field there were 2,281 cases that were either classed as NULL (n=1,814), unknown (n=167), or stating the referral was 'unborn' (n=280). The gender split (female/ male) for cases showed that two thirds of lead referrals (i.e., those who were being referred) were female (66.5%, n=37,038) and a third (33.5%, n=18,662) were male. This is a similar finding to that within the crime data, which showed that females were more likely to be recorded as vulnerable when victims of domestic abuse crimes (see chapter 7). This victim profile aligns with what Christie (1986) described as the 'ideal victim', and hence more likely to be recorded as vulnerable (Green, 2012). The high proportion of vulnerable females was also noted by Shorrocks et al. (2019b, p. 206) who found that the lead referral was mostly female (in their analysis, females accounted for "68%" of the total). This may not be surprising when the most common referral reason was domestic abuse (DA) and the majority of victims in DA cases are female (Stevens et al., 2016). Shorrocks et al. (2019b, p. 208) suggest that it demonstrates that women are more likely to be "susceptible to becoming victims of abuse".

Table 8.4: Gender of PVP lead referral.

Gender	Count	%
Female	37,038	66%
Male	18,662	34%
Grand Total	55,700	100%

PVP gender and age

Data fields in relation to age and date of birth were noted as being inconsistently completed across the 3 different samples of recorded data used in this thesis. Out of the three data samples, the PVP data was more robust with regard to date of birth and recorded age. There were 130 records that had no date of birth or age details which equates to only 2.3% of the total number of cases. The cases with no age and recorded date of birth were removed from analysis relating to age and this lowered the number of viable referrals to 55,570.

The most noticeable difference between gender groups and age was that of males who were aged 12 and under comprised the largest proportion of male referrals. This group was the largest percentage group for all male age groups (20%, n=3,703) and this age group was more than double the percentage of females (8%, n=3,093) in the same age group. This was a surprising finding considering that females accounted for 66% of all referrals. The main referral reasons were for *neglect* (n=947, 25.5%) and *physical* (n=769, 20.7%). At the time of writing there was no available literature to explore this further.

Table 8.5: Gender and age group of lead referrals.

Age groups	Female		Male		Total	
	n	%	n	%	n	%
12 & under	3093	8%	3703	20%	6796	12%
Teens	5852	16%	3038	16%	8890	16%
20s	9779	26%	2841	15%	12620	23%
30s	7904	21%	2734	15%	10638	19%
40s	5155	14%	2427	13%	7582	14%
50s	2498	7%	1762	9%	4260	8%
60s	964	3%	870	5%	1834	3%
70+	1693	5%	1257	7%	2950	5%
Total	36,938	100%	18,632	100%	55,570	100%

Gender and ethnicity

The ethnicity for lead referral cases was consistent across both genders. A chi-square test showed that there was no statistical significance. This has also been found in other research of MASH referrals (Shorrocks et al., 2019b) and research regarding adult safeguarding (Stevens et al., 2016). Further, distribution of PVPs across ethnicity aligns with the ethnic population of the policing area⁵⁹.

⁵⁹ This is based on the census demographic data for the area (see chapter 4 for more detail).

Table 8.6: PVP gender and ethnicity.

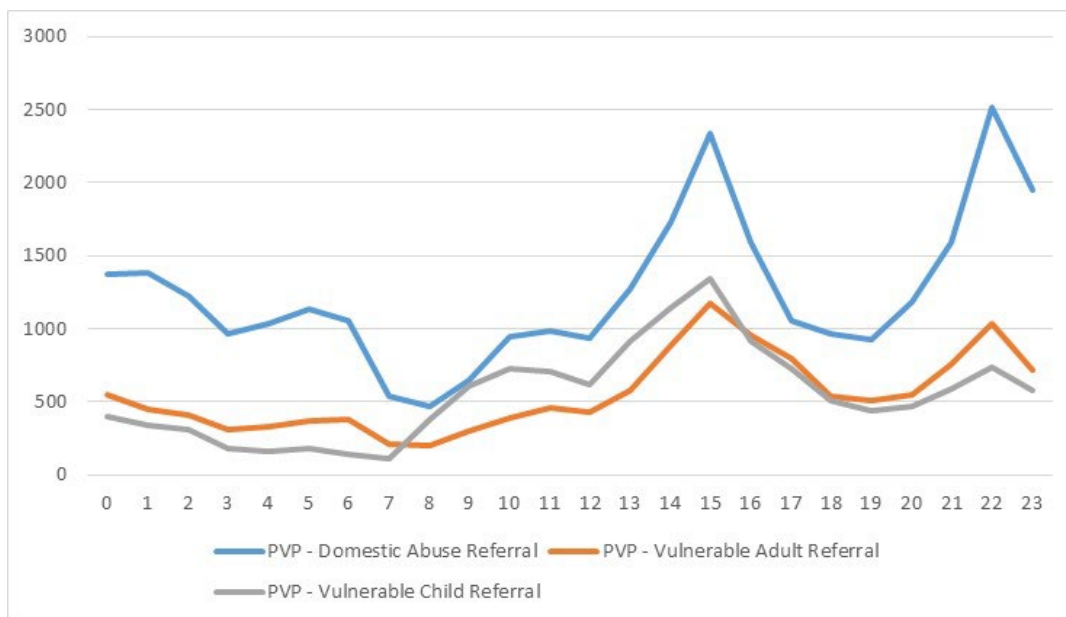
	Female	%	Male	%	Total
White - North European	32,349	87.3%	16,148	86.5%	48,497
Asian	2,193	5.9%	1,087	5.8%	3,280
Unknown	1,736	4.7%	1,054	5.6%	2,790
Black	411	1.1%	191	1.0%	602
White - South European	179	0.5%	104	0.6%	283
Middle Eastern	89	0.2%	46	0.2%	135
Chinese, Japanese or Southeast Asian	81	0.2%	32	0.2%	113
Total	37,038	100%	18,662	100%	55,700

Temporal (time) pattern for PVP event

As discussed in the previous data chapters, temporal analysis can be used to explore patterns of crime and harm (Santos, 2015; Clarke and Felson, 1993). The temporal pattern for PVP referrals was similar across the 3 primary referral events. The temporal pattern for each event is shown in figure 8.1 below. There was a significant peak at 3pm and a second peak at 10pm across all 3 events. This was similar to the findings in the recorded incident data (chapter 6), which showed vulnerable-related incidents peak at 3pm. However, recorded incidents showed a steady rise in occurrences up to 3pm and did not start to fall until after 6pm. The temporal pattern here is somewhat different in that there is a sharp rise after 7am and then occurrences drop before rising again after 7pm and displaying a second peak at 10pm⁶⁰. This could be explained through routine activities (i.e., lifestyles) and general demands for police assistance (Dewinter et al., 2022; Boivin, 2018; Cohen and Felson, 1979).

⁶⁰ There was a similar pattern for PVPs that had a crime reference attached to the referral. The temporal pattern is similar to that of all PVPs and is therefore included as an appendix. For further detail please refer to appendix 5.

Figure 8.1: Temporal pattern and PVP primary referral reason.

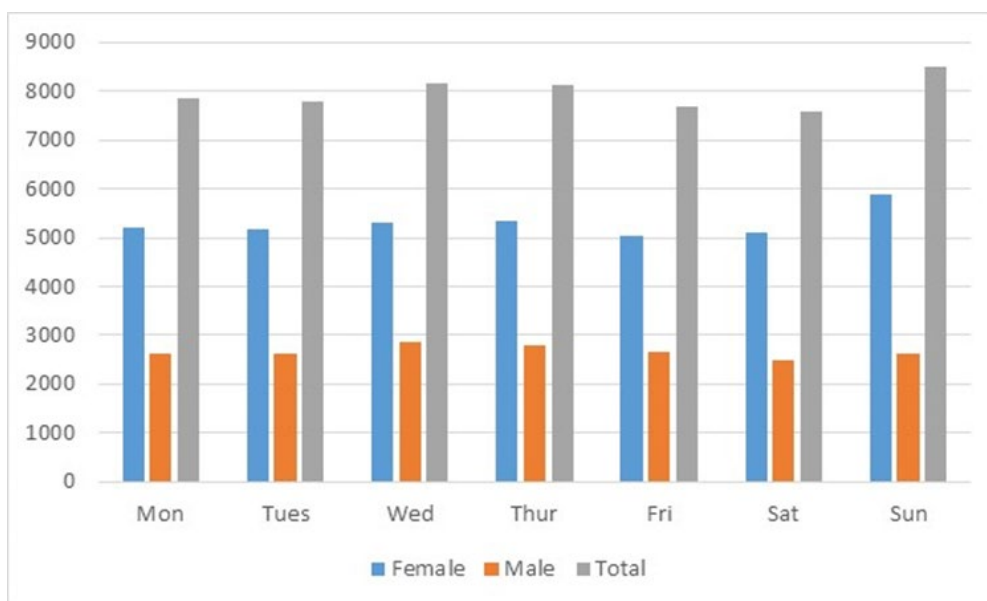


Referrals are not necessarily linked to crime, despite most referral reasons being crime focused. This means it is difficult to assess reasons for the temporal pattern. Responding to crime and other incidents may impact on when officers have time to complete a referral. There is a gap in the literature regarding temporal analysis of PVP (or any MASH) referrals and this is possibly an area for future research. However, existing research regarding crime and calls for service may offer some insight into the temporal pattern. Explanations for crime occurring at specific times of the day is most often related to routine activities (Cohen and Felson, 1979). Opportunities present themselves throughout the course of the routine activities of an offender's (and victim's) day. Cohen and Felson (1979) famously noted that "most criminal acts require convergence in space and time of likely offenders, suitable targets and the absence of capable guardians against crime" (1979, p. 588). This could explain the peak in the middle of the afternoon. Understanding the local context and lifestyles is a key consideration when attempting to understand criminal behaviour (Boivin, 2018; Felson and Boba, 2010).

Temporal (daily) pattern for PVP event

There was a consistent level of PVP cases when examined by day of the week. This was the same for gender and the overall total number of cases. There was no statistically significant pull within the data when examining day of week. These findings are consistent with that of recorded incidents that were taken from calls that were recorded as being made by victims (see chapter 6). These two data sets suggest that victims regarded as vulnerable are consistent throughout the week. This is in contrast to the crime data that showed a different pattern. The evidence from the recorded incidents and the recorded PVP referrals suggest that other factors influence the daily temporal distribution of recorded crime. This is most likely influenced by the types of crime recorded, e.g., violent crimes that occur over weekends, which would be one explanation for the difference between the datasets. The evidence from the recorded incidents and recorded PVPs also suggests that vulnerability is a consistent daily occurrence. The figure below (figure 8.2) shows the daily distribution of PVP referrals by lead referral and day. This shows consistent recording through the week. The thesis suggests that findings from recorded incidents and PVP referrals provide evidence that vulnerability is a constant issue for policing throughout the week.

Figure 8.2: Gender of lead referral by day of referral.



PVP repeat referrals

A similar process to that used in the recorded crime and incidents data samples was used to assess repeat victimisation. Again, there were two elements of victimisation to examine: the actual victim (person) and the location. A unique ID was created for the person using the forename, surname and date of birth fields. This identified 28,538 unique cases based on the person's unique identifier and 8,971 cases were repeat cases. This equates to 31.4% of individuals being a repeat referral when examining the person identifier. This was the highest percentage of repeat individuals across the three data sets. Not only was this the largest percentage, it was also the greatest volume. This further suggests a link between vulnerability and repeat victimisation.

The location details for PVP referrals were easier to assess than the previous two data sets. There was a field called 'incident location' address (ID code 23) and this contained the full address of where the event (that resulted in a referral) took place. There were 11,633 unique cases for the location and the number of repeat cases was 7,117. This equated to 61% of locations being a repeat location. This was the highest repeat percentage rate for location across all three data sets. The finding here is that repeat victimisation, location and vulnerability are linked, which has also been identified in other research (Weisburd et al., 2018; White and Weisburd, 2018).

Overall, repeat victimisation, both person and location, was much greater in the PVP referral data set than for recorded incidents and crime. Shorrock et al. (2020, p. 11) noted that repeat victimisation was "associated with both static and dynamic risk factors". Their findings are consistent with the data set used in this thesis. Additionally, repeat victimisation involved situational factors that highlighted that victimisation is not necessarily random (Shorrock et al., 2020). In relation to vulnerability, there has been little development in the literature regarding crime, situational factors and policing vulnerable people (Asquith and Bartkowiak-Théron, 2021; Keay and Kirby, 2018; Asquith et al., 2017).

Linking data sets: PVP, incidents and crime

The research for this thesis then moved on to explore the links between recorded incidents, recorded crimes and PVP referrals. In order to this the three separate data sets had to be linked. This was done using the incident reference that is also a field on the crime data and PVP data. The data sets were linked through a VLOOKUP formula in Microsoft Excel (Winston, 2016). The aim of this analysis was to explore the possible progression and links between the data sets. The hypothesis being that all vulnerable-related incidents and vulnerable-related crimes should have a PVP referral.

PVP referrals and recorded incidents

The next step was to explore the recorded incidents and PVPs. A cross tabulation shown in table 8.7 below, revealed that 9% (51,858) of recorded incidents had a PVP referral. However, just under a half (44.8%, n=12,563) of vulnerable-related incidents also had a related PVP referral. This also meant that 55% (n=15,485) of vulnerable-related incidents did not have a PVP referral.

Table 8.7: PVP referrals and vulnerable-related incidents.

		Vulnerable-related incidents		Totals
		1 (yes)	2 (no)	
PVP Referral	1 (yes)	12,563	39,295	51,858
	2 (no)	15,485	505,406	520,891
		28,048	544,701	572,749

Another way of expressing these numbers is to say that if there is a vulnerable qualifier on the incident there is a 0.45 probability (12,563/ 28,048) of there also being a PVP referral. If there is a PVP referral there is a 0.24 (12,563/ 51,858) probability that there is a vulnerable qualifier on the incident. All PVP referral records have an incident reference code. A call for service may result in a recorded incident that requires an officer attendance. Situational context could be a key function in the application of PVP referrals: officers attending an incident event might then determine that a PVP referral is required (Wilcox and Cullen, 2018; Felson and

Boba, 2010). However, the recorded incident may not necessarily have a vulnerable qualifier added as detailed in chapter 6, or a PVP referral. This may account for the difference in probability scores.

PVP referrals and recorded crimes

As above, a cross tabulation (shown in table 8.8, below) shows that 3.6% (n=4,154) of recorded crimes had a PVP referral. There were 12% (n=1,393) of vulnerable-related crimes with a PVP referral (1393 / 11,648). This meant that 88% (10,255 / 11,648) of vulnerable-related crimes did not have a PVP referral. Further to this, 66.4% (n=2,761) of recorded crimes with a PVP referral did not have a corresponding vulnerable qualifier. Vulnerable qualifiers do not get added retrospectively on to recorded crimes. The PVP referral is often addressed during further investigation at the scene of the crime. This may then be a development that occurs away from the recording of the crime event. These findings show the inconsistency in the application of vulnerable qualifiers on recorded crimes. Vulnerable qualifiers do not get added retrospectively, which negatively impacts on the data as an appropriate measure of vulnerability.

Table 8.8: PVP referrals and vulnerable-related crimes.

		Vulnerable-related crimes		Totals
		1 (yes)	2 (no)	
PVP	1 (yes)	1,393	2,761	4,154
	2 (no)	10,255	99,870	110,125
		11,648	102,631	114,279

Expressing this as a probability shows there is a vulnerable qualifier on the crime there is a 0.12 (1,393/ 11,648) probability of there also being a PVP referral. If there is a PVP qualifier, there is a 0.34 (1,393/ 4,154) probability there also being a vulnerable qualifier on the crime. This could be taken to mean that there is a lower threshold for vulnerability when informing a PVP referral than when putting a vulnerability qualifier on a crime record. It is certainly the case that vulnerability is expressed differently according to what it is translated into on a record.

PVP referrals and crime groups

Exploring the Home Office Crime Classification (HOC) groups was a means of identifying if there were any specific crime groups where vulnerability was attributed. Table 8.9 shows crime groups that have a vulnerable qualifier on the crime, a PVP referral or both on the crime record.

Table 8.9: Attribution of vulnerability and crime groups.

Offence Group	Not Vulnerable	Vulnerable crime qualifier only	Vulnerable by PVP only	Vulnerable (both)	Total
Criminal damage & arson	17,560	1,026	341	90	19,017
High impact acquisitive crime	7,799	888	41	57	8,788
Other acquisitive crime	31,332	988	122	69	32,511
Other crimes against Society	2,932	370	48	43	3,393
Sexual crimes	1,840	1,670	107	222	3,839
Vehicle crimes	9,837	111	15	1	9,964
Violence against the person	28,570	5,202	2,084	911	36,767
Total	99,870	10,255	2,761	1,393	114,279

This data was then used to calculate the probability of each crime group being attributed a vulnerable qualifier, either as a crime qualifier, a PVP or both. This is shown in table 8.10, below.

Table 8.10: Ranking of offence groups by vulnerability.

Offence group	Probability of vulnerability ⁶¹	Total
Sexual crime	0.52	3,839
Violence against the person	0.22	36,767
Other crimes against society	0.14	3,393
High impact acquisitive crime	0.11	8,788
Criminal damage & arson	0.08	19,017
Other acquisitive crime	0.04	32,511
Vehicle crime	0.01	9,964
Total		114,279

⁶¹ The probability is calculated from the number of vulnerable cases (vulnerable crime qualifier, PVP qualifier or both) divided by the overall total, e.g., sexual crime: $(1,670 + 107 + 222 = 1,999) / 3,839 = 0.52$

Clearly sexual crime is the outlier, it is the only offence category associated with a majority of recorded vulnerability, a level between two and three times the category associated with the next highest recorded level (violence against the person). This further supports earlier findings (see previous chapter) that recorded vulnerability is more likely associated with sexual and violent crime.

PVP referral data offer more detail of vulnerability than the incident or crime data. Recorded incident data and recorded crime data are not good indicators of vulnerability. Using all three data sets as isolated data can be confusing and inconsistent when assessing vulnerability. The PVP referral data, through definition, is the most appropriate data set for analysis of recorded vulnerability (Shorrocks et al., 2019a; 2019b). PVP referrals are used to assess, via the MASH, further activity in response to vulnerability. The incident and crime data simply place a qualifier on an event that does nothing to progress action for vulnerable people other than highlight a potential need for victim services. The analysis here could only have been possible by manually linking the data sets through the incident reference, which demonstrates the inconsistency of police recorded data as a means of examining vulnerability. Research for this thesis suggests that incident and crime data do not provide the right measures of vulnerability and cannot provide the level of detail that focus group practitioners sought. The thesis argues that PVP data is the only reliable measure for recorded vulnerability in a police context, but there is potential bias towards criminality being an influencing factor in determining vulnerability.

Chapter summary

The aim of this chapter was to explore the recorded PVP referral data sample. PVP referral data is directly related to identifying vulnerable people, more so than either the crime or incident data. It is explicit in its title: protecting vulnerable people. The purpose of the referral data collection by the referring officer is to aid decision-making in the MASH for requesting further agency support for the vulnerable individual (Shorrocks et al, 2019b; Stevens et al., 2016; Crockett et al., 2013). Menichelli (2021, p. 705) argues that mobilising activity centred around vulnerability facilitates “cross-agency cooperation” and the focus group practitioners were clear that there needs to be partnership support for dealing with vulnerability. It is vital that vulnerable individuals are signposted to the most appropriate service. Analysis of the

PVP referral data for this thesis suggests that the PVP data offers a more comprehensive insight in understanding recorded vulnerability or where there is a potential safeguarding issue. It also recognises that dealing with vulnerability involves a multi-agency response. This was highlighted by the practitioners during the focus group. However, having knowledge of what services are available and understanding different agency terminology is also essential for practitioners (Anderson and Burris, 2017; Bartkowiak-Théron and Asquith, 2012b).

Measuring recorded vulnerability is difficult and the 3 data sets explored in this thesis suggest that recorded data is inconsistent and does not offer a unified measure of vulnerability. Exploring the three data sets could result in 'mixed messages', something that was discussed in the focus group (see chapter 5). Vulnerability is not consistently recorded across the 3 data sets as identified in this thesis. This thesis also shows that PVP referral data can record potential vulnerability at a point past any incident or crime recording and therefore those two data sets do not necessarily have the appropriate vulnerable qualifier. Yet the literature shows a need for policing to develop an evidence base around vulnerability measures (Higgins and Hales, 2016). The PVP referral data is perhaps the most comprehensive when it comes to recording vulnerability and this thesis argues that the PVP data alone should be used as a measure of vulnerability. The PVP data also places a shared responsibility of response on a number of social care and health agencies as well as those engaged in safeguarding (Menichelli, 2021; Shorrock et al, 2019b).

Victimisation also appears again within this thesis as a key area of vulnerability. Firstly, females are more likely recorded as vulnerable victims. A consistent finding across the PVP referral data and recorded crime data is that females are more likely to be recorded as vulnerable. This has also been noted in wider research (Shorrock et al., 2019b; Asquith et al., 2017; Bartkowiak-Théron and Asquith, 2012a). The second issue around victimisation was that of repeat victimisation. To identify repeat victimisation the data had to be re-coded by the researcher. This is not a readily accessible function for practitioners (or police researchers). From a policing perspective, IT systems need to be configured to identify repeat victimisation. Without this support, individuals who are repeatedly victimised would only be recognised through officer knowledge (this is reliant on which officer may attend

each situation), investigation of the referral or directed analysis. Similar to the previous two data samples, PVP referrals show high percentages of repeat victimisation (RV). The level of RV was higher in the PVP data than in the previous two data sets. Further, there was no evidence that being a repeat victim increased the probability of being recorded as vulnerable, which is in contrast to the wider literature (Pease et al., 2018; Graham-Kevan et al., 2015; Tseloni and Pease in Shoham, et al., 2010; Farrell and Pease, 2008, Walklate, 2007; Farrell and Pease, 1993). Therefore, this thesis argues that RV should be a key priority for police forces when looking to identify and respond to the most vulnerable people. The impact of RV has been a consistent theme in this data analysis for this thesis and one that occupies a central position in the overall findings. Repeat victimisation should be a significant issue for policing (Pease et al., 2018; Goldstein, 1979) and yet based on the processes and systems in place, as covered in this thesis, it is difficult to identify repeat victimisation.

The PVP referral data, similar to that of the recorded incidents, show that events involving vulnerability are consistent throughout the week. This supports the notion that vulnerable people present a constant demand for police attention that is not reflected in the recorded crime data, with the latter being skewed by the nature of specific crimes, e.g., violent crime and sexual assault.

Chapter 9: An ecological approach to understanding vulnerability

Aims of chapter

This chapter proposes an ecological approach to help visualise how vulnerability is layered (Luna, 2009). This could improve police understanding of vulnerable people and vulnerable situations. This approach also incorporates wider research identified during the literature review (Brown, 2017; Bartkowiak-Théron and Asquith, 2012a; Innes and Innes, 2013; Mistzal, 2011; Luna, 2009; Green, 2007). A review of the literature noted many issues faced by policing when attempting to identify vulnerability, a result possibly stemming from flawed or ambiguous definitions (Wrigley, 2015; Hurst, 2008). As the breadth and categories of vulnerability continue to grow, it can create an inconsistency that exacerbates confusion for front line workers (Brown, 2011; Williams et al., 2009; Appleton, 1994). The consequence of this is a negative impact on how police staff attempt to understand the expectations placed upon them by the organisation they work for, in comparison to the operational reality they face when responding to their communities (Herrington and Serbie, 2021; Herrington and Colvin, 2016). This was a clear and significant finding from the focus group in this thesis (see chapter 5). In response to this, this thesis argues for a structured understanding of vulnerability that can be adaptable and applied to the policing of vulnerability. This is presented in the form of an ecological approach to understand various layers of vulnerability (Winter, 2017; Luna and Vanderpoel, 2013; Hollomotz, 2009). If applied to the context of policing vulnerability this approach can be used to educate and assist frontline policing in understanding the various attributes, or traits, that may contribute towards vulnerability (Asquith and Bartkowiak-Théron, 2017). Subsequently, this chapter will provide the rationale, based on the research from this thesis, for the use of such an approach and how it could be applied in practice.

The chapter will start by establishing the context of developing an ecological approach. The chapter will explore how it will be possible to use such an approach in an operational (police) setting, thus supporting the police response to dealing with vulnerability. The chapter will then discuss the ecological approach in line with Luna's (2009) layered of vulnerability. The aim of this approach is to translate the

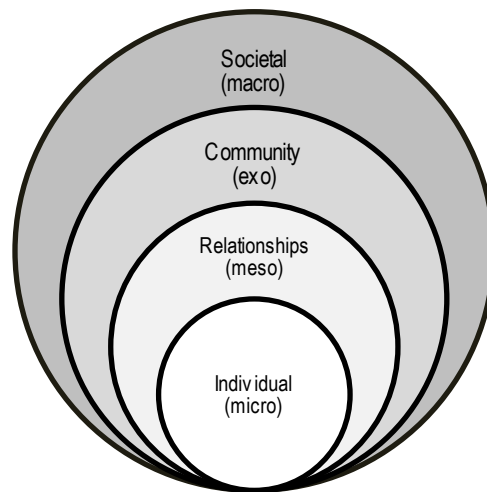
conceptual to the operational and help police practitioners better understand the complexity of vulnerability. It is anticipated that this will support improvements in the service provided by the police for vulnerable people and those in vulnerable situations.

Taking an ecological approach to visualising vulnerability

Ecological systems theory (EST) has been used in research to understand various aspects of human development (Bronfenbrenner, 1977). Numerous models have been proposed in support of a range of themes, such as the social-ecology of public safety (Asquith and Bartkowiak-Théron, 2017), social work (Siporin, 1980), school psychology (Burns et al., 2015), media research (Gee, 2020) and the impact of poverty on educational attainment (Nation et al., 2020). This demonstrates its universal appeal. However, it is not without critique (Elliot and Davis, 2020; Darling, 2007). Therefore, this thesis merely suggests an ecological approach to help understand and identify potential vulnerability in a policing context. To date, this has not been directly applied in a police setting. An early iteration of the model of vulnerability developed from this thesis research was presented as a ‘conceptual map’⁶² (Keay and Kirby, 2018). In the same year Asquith and Bartkowiak-Théron (2017, p. 154) discussed the World Health Organisation’s (WHO) social-ecological model of health model as a means of supporting the “police as public health interventionists”. The WHO model comprises of four nested layers: individual, relationships, community and societal (Asquith and Bartkowiak-Théron, 2017; Neal and Neal, 2013), all of which are depicted in figure 9.1 below.

⁶² The conceptual map was first published online as an advance publication. The print version (published a year later) is cited in this thesis as Keay and Kirby (2018) and referenced in the thesis reference list. This was based on early iterations of the literature review (chapter 2) and findings from the focus group (chapter 5) for this thesis.

Figure 9.1: WHO social-ecological model of health.



Asquith and Bartkowiak-Théron (2017, p. 153) used this model to demonstrate the “wider contexts of health emanating from the individual” in relation to policing. They theorised that the model shows the links between policing and health as more obvious and offers direction for policy and strategy development between law enforcement and health agencies (Asquith and Bartkowiak-Théron, 2017). Asquith and Bartkowiak-Théron (2017) discuss the model in terms of policy alignment between law enforcement and health agencies rather than consider it for more practical and operational purposes. Winter (2017) went a step further and applied this to understanding various risk factors in intimate partner violence. This helped highlight situational context as a key aspect of the operational problems faced by policing.

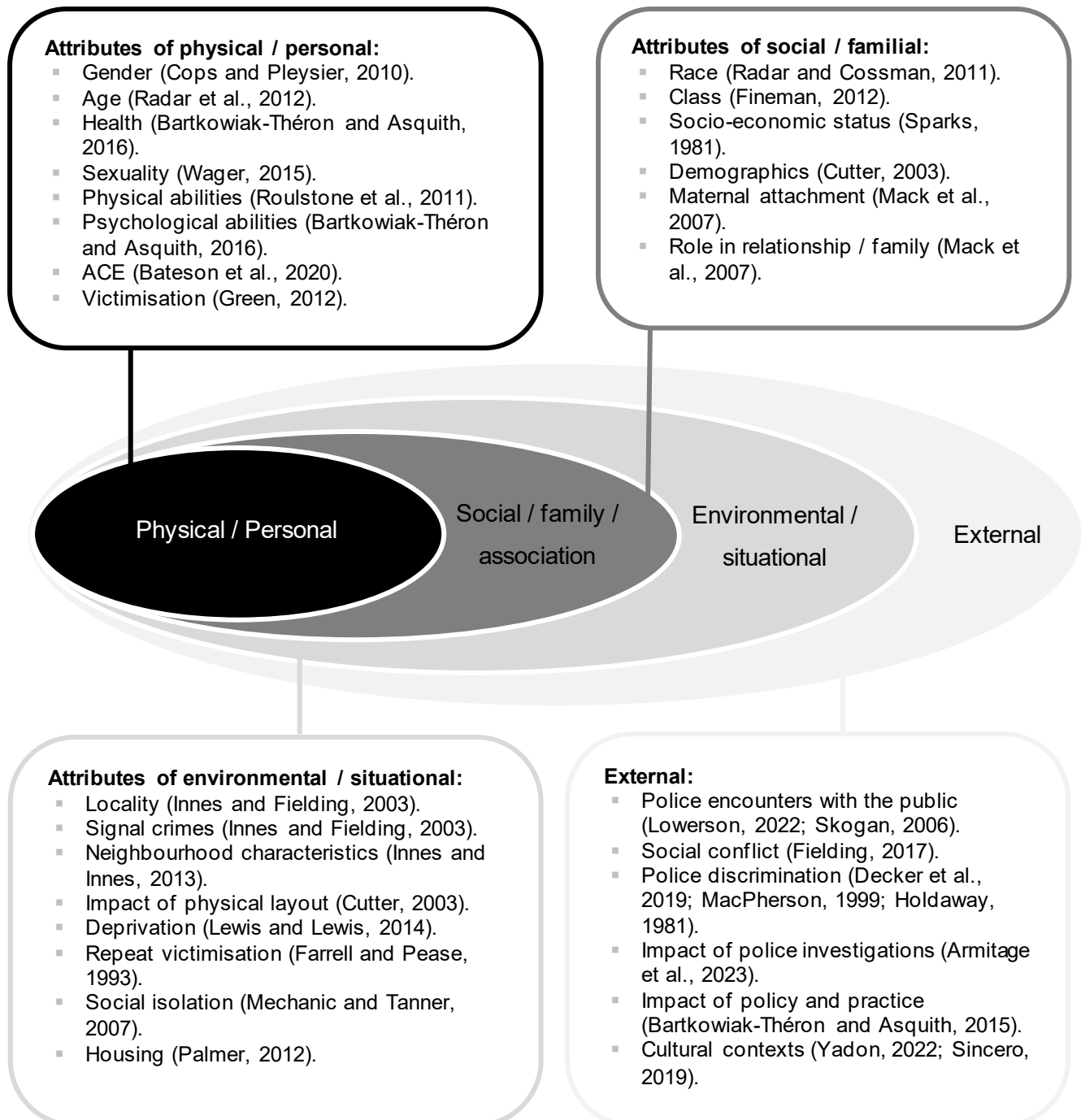
An ecological approach as a tool to improve a policing response

In chapter 5, this thesis discussed how a focus group was used to compare current academic thinking surrounding vulnerability and vulnerable people with the views and experiences of serving police officers and police staff. The views of practitioners in the focus group were consistent with academic research in describing the different facets of vulnerability and its multi-layered nature (Bartkowiak-Théron and Corbo Crehan, 2010). This aligns with Luna’s (2009) perception of vulnerable attributes as layers. An ecological approach moves away from categories or labels of vulnerability

and supports a policing response in several ways. As an operational aid, it can be used to enhance data collection, support partnership intelligence development and, direct an appropriate agency response. It can also be used as an educational tool for students of policing.

It was noted in the focus group that public services can, and often do, work in silos but must work more closely in partnership to tackle vulnerability (Bartkowiak-Théron and Asquith, 2012b). An ecological approach can be used by various organisations and provide a template from which to grow a shared knowledge base around vulnerability, partnership data and intelligence. This can also support the continuous professional development of front-line responders dealing with vulnerable people. With all this in mind this thesis proposes the approach show in figure 9.2 (below).

Figure 9.2: An ecological approach to understanding vulnerability in a policing context.



The listed attributes and related references in the model presented here are not an exhaustive collection of factors affecting vulnerability. The cited research provides an example of when these traits have been identified as a prominent attribute of vulnerability in the literature (see chapter 2). Some factors may be positioned in one

or more layers. For the purposes of the approach devised here, the positioning of the factors and layers is based on the literature in relation to policing vulnerability.

Layers of vulnerability and social division

The ecological approach has a series of layers in “a nested arrangement of structures, each contained within the next” (Bronfenbrenner, 1979, p. 22). Each layer represents a different attribute⁶³ that may influence or impact on an individual (Neal and Neal, 2013; Bronfenbrenner, 1979). These should not be seen as exclusive or exhaustive. The literature review discussed how policing have historically viewed vulnerability as a series of categories as opposed to layers. This approach misses the notion of *intersectionality* (Crenshaw, 2017; Anthias, 2013) that recognises how social divisions (Brown et al., 2017) can have multiple influences on an individual. A layered approach to vulnerability helps, to some degree, visualise this. The attributes within the layers are there for illustrative purposes to guide policing practice and add to the debate regarding vulnerability in a policing context. As mentioned earlier in this thesis, some of these attributes are recorded within police data and therefore mean that this can be used for analysis to help the police develop insight on those recorded as vulnerable. This also helps direct policing practice and responses.

Individual layer: physical or personal attributes

The first layer relates to the individual, where physical and personal characteristics, associated with vulnerability, can have a direct impact on a person. An individual’s history could highlight some of the attributes of this level, e.g., events that impacted on them growing up. Living with vulnerable traits, such as a disability (Henshaw and Thomas, 2012), or having a vulnerable identity, such as being a victim of crime (Green, 2012; Perloff, 1983), can carry consequences for that person (Fohring, 2018). Innes and Innes (2013) argue that personal vulnerability can render some people more sensitive to negative impacts because of their social status, identity and or their physical or mental state. Personal traits may influence an individual’s

⁶³ For a simple summary of the different systems please refer to Sincero (2019).

behaviour or contribute to their vulnerability, but also, they may add to a person's resilience (Buckle et al., 2000).

At this level, the characteristics here can influence how the individual themselves interacts with the surrounding layers (i.e., their environment). It is essential for police officers to understand the needs of the individual that improves their resilience and ability to deal with the world around them (Walklate, 2011). As police officers are often supporting victims, this particular layer is one where the police can have significant influence.

Social layer: social, family and associations

The second layer is related to social, familial and associations linked to the individual. These can relate to an individual's interactions with those people directly around them, e.g., family, neighbours, care workers (Sincero, 2019). Neal and Neal (2013) recognise this as a setting in which a group of people are engaged in social interaction that includes the individual at the centre. They consider it as "social interaction between participants in different settings that both include the focal individual" (Neal and Neal, 2013, p. 724). This layer demonstrates the impact of social interaction and the importance of associations for individuals. For policing, associations and the networks that an individual is exposed to can be a significant impact in determining what response the police take (Sparrow, 1991).

Situational layer: environmental and situational

The third layer relates to wider environmental or situational factors that surround the individual and their networks. These issues can be situational, rather than dispositional and are potentially the easiest to address, e.g., moving house or engage in target hardening (Johnson et al., 2017). Innes and Innes (2013) argue that situational influences can have a significant impact on vulnerability and these influences can amplify the risk of harm to individuals. Research by Innes and Innes (2013) highlighted that vulnerable victims were disproportionately exposed to a combination of factors within personal, social, and situational systems. Furthermore, the research exposed that the police missed key information when developing knowledge of vulnerable events and vulnerable people. When tailoring responses,

the police need to recognise the various influences that add to, create or exacerbate vulnerability. Thus, emphasising a need to link various types of data to better understand the risk of harm to an individual. The use of an ecological approach will improve how decisions on operational responses can consider the various influences different layers have, including data collection. When considering the analysis and research throughout this thesis, it is suggested that this layer is where the police can have the greatest potential to have a positive impact on vulnerability, particularly on repeat victimisation (Farrell and Pease, 2008).

External layer: wider societal impacts

There are many external factors that can directly or indirectly influence an individual. For example, there are wider structural notions of vulnerability, created through the unintended consequences of government policy or systems. This can include cultural contexts that relate to the development of the individual, e.g., being born to a poor family in a third world country (Sincero, 2019). At this layer the policies and practices of government (and other agencies) can have a significant impact on the perception, behaviour, and interaction of individuals. This would certainly be the case for those vulnerable individuals who are exposed to the criminal justice process (Dehaghani, 2021). Perceptions of the police can influence future interactions that may mean certain groups no longer regard the police as legitimate and therefore do not consider them as a supportive agency (Helsby et al., 2018), e.g., the widespread ramifications of the MacPherson report following the Stephen Lawrence murder that highlighted institutional racism within the police is still felt in many areas of the UK (Bartkowiak-Théron and Asquith, 2015; MacPherson, 1999). This was exacerbated by the murder of George Floyd and the Black Lives Matter movement (Yadon, 2022). More recently the murder of Sarah Everard has had an adverse impact on relations between the police and the public (Lowerson, 2022). This can intensify vulnerability and even escalate levels of harm. Therefore, police forces must be mindful of and adopt measures to identify problematic staff who's harmful (and sometimes illegal) behaviour can have a serious impact on the public and police legitimacy (Helsby et al., 2018; Jackson et al., 2017).

Improving the policing response to vulnerability

The proposed ecological approach to vulnerability was originally published as a conceptual map (Keay and Kirby, 2018). This was based on early research for this thesis. The aim was to promote its use to improve engagement between police staff and partner agencies in contextualising vulnerability and to signpost staff to the correct service for appropriate support. The factors presented in the map are by no means exhaustive or the only means of conceptualising the process. The purpose of it is to highlight potential characteristics or attributes that can influence, be present in, or exacerbate vulnerability. Vulnerability can be one or more attributes within a layer, or multiple ones across a variety of layers (Luna, 2009), also noted by Bartkowiak-Théron and Asquith as “cross-sectional” vulnerability (2012b, p. 46).

An ecological approach of this type encourages police practitioners to maintain focus upon behaviours and trends within these layers and encourages collaboration with other agencies around data sharing and partnership working (O’Neill, 2013; Hughes and Rowe, 2007). People in subpopulations may have multiple vulnerabilities, which can vary from person to person (Luna, 2009). Paterson and Best (2015) argue people should not be placed into contentious subpopulations of vulnerability and be left there awaiting some form of service. Therefore, this approach can help reduce the danger of ignoring individual need allowing people to be prioritised on necessity, in terms of harm (Wood, J.D., 2020). So, for example, an individual who is suffering mental illness, who is also homeless due to debt could be appropriately supported through several organisations.

A multi-agency approach to tackling underlying issues that affect policing encounters has long been highlighted (Schuller, 2013), with a growing emphasis towards health and wellbeing (Enang et al., 2019). Schuller (2013) noted that perhaps crime is a question of health and argued that there should be a convergence of health disciplines and that of criminal justice and community safety. There are many links between health and crime (Bartkowiak-Théron and Asquith, 2017) with both issues costing millions to public services and the wider community. The police are often called to assist in dealing with the symptoms of these issues, they can be part of the solution by helping to tackle the root causes (Goldstein, 1979), that generate and exacerbate vulnerability (Bartkowiak-Théron and Asquith, 2017). Specifically, the

police are often in a good position to lead the triage process, identifying need and (when not able to find the solution themselves) act as brokers for the most suitable service (Bartkowiak-Théron and Asquith, 2012b). As such, they are able to signpost individuals to the right services to step them down from their crisis and helping to prevent them becoming a repeat service user. Taking an ecological approach to understanding vulnerability in a policing context encourages police forces to work in collaboration with other agencies for the benefit of vulnerable people.

Chapter summary

The ecological approach is the result of the research conducted for this thesis. The operational use of this approach can help construct the complexity of vulnerability in a manner that directs the collection of information and data and sign-post service provision beyond policing. It's use of layers breaks down the complexity into tangible parts that can educate and influence how police practitioners view vulnerability (Bartkowiak-Théron and Layton, 2012). That is not to say that vulnerability can be so readily simplified (Enang et al., 2019; Luna and Vanderpoel, 2013). However, for policing purposes it provides a structured approach to identifying vulnerability and explaining a range of related phenomena that can identify contextual points for intervention (Neal and Neal, 2013). This approach acutely articulates the importance of context for encounters between the police and vulnerable people (Asquith et al., 2017; Munro, 2017). Furthermore, this approach can be used to satisfy the concerns expressed in the focus group (see chapter 5) about ongoing policing issues as to what and who is vulnerable, and what they might be vulnerable to. The findings presented here also direct police practitioners to consider the targeting of the environmental/ situation element as this is where they can have the greatest impact. Due to the remit of the police organisation, the other elements are best targeted through a multi-agency response (this will be discussed in the next chapter).

Chapter 10: Discussion of findings

Aims of chapter

As emphasised at the beginning of this thesis there has been a significant rise in research on vulnerability and vulnerable people since 2010. The literature has extended to that of policing vulnerable people, which has gained momentum during UK austerity measures between (2010 – 2019). Cuts in public sector funding have meant that public services have had to refocus their resources and the services they deliver (Millie, 2014). It is generally accepted that modern policing has become more complex in recent years (Herrington and Serbie, 2021; Brown, 2014; Reiner, 2010) and some have questioned the capacity of the police to handle this complexity (Vitale, 2017; Sparrow, 2016; 2008; Herrington and Colvin, 2016). This has become more acute with corruption, illegal behaviour, perceived race and gender inequalities, and police scandals that have had a detrimental impact on police legitimacy (Casey, 2023; Brantingham et al., 2022; Decker et al., 2019; Helsby et al., 2018). It is essential for researchers to examine these challenges and provide an evidence-base to improve the effectiveness and efficiency of the police service against recognised challenges (Sherman, 2019; 1998). Therefore, this thesis aimed to explore the nature of policing vulnerable people for two purposes: to contribute to existing knowledge and to offer guidance and make recommendations to support practitioners. A core assumption throughout this thesis has been that all those who call the police for assistance are vulnerable in some way. However, as the evidence shows, not all vulnerabilities are equal (Asquith et al., 2017; Cole, 2016; Bartkowiak-Théron and Asquith, 2012; Luna, 2009).

The purpose of this chapter is to discuss the main findings and reflect on the consequent implications for policing vulnerability, both in theory and in practice. The chapter begins by revisiting the research aims before discussing them in relation to the research findings, from the focus group through to the three different data sets. Limitations of the research are then considered and how these may affect the results and findings from this thesis. Next, the implications for theory and practice are considered, before exploring how the police and law enforcement agencies involved in supporting vulnerable people can translate the research findings into policy and

practice. The chapter concludes with recommendations for future research that might further advance studies into policing vulnerability and where the police, as a public service, might best serve those with specific needs.

Revisiting the aims of the research

To reiterate, this thesis is primarily concerned with exploring vulnerability in a policing context. This chapter argues that vulnerability is an essential and useful concept in policing. Whilst defining it has been problematic (Brown, 2017; Wrigley and Dawson 2016), there is no doubt that the shift in emphasis for the police to support vulnerable people is a welcome one. However, as shown in this thesis, there remains a lack of understanding about what policing vulnerability actually means for front-line staff, but recorded police data has a wealth of information that can be used to improve how police forces improve their response to vulnerability.

There are three key themes of the thesis: how the police define, identify, and then respond to vulnerability. The literature review (chapter 2) discussed definitions of vulnerability and how these definitions might be used to identify vulnerability. How the police defined, identified, and responded to vulnerability was explored through a focus group of practitioners. The findings from the focus group, along with the 3 data sets, suggests that the police regard vulnerability as a series of categories and that whilst vulnerability comes in many shapes and sizes, there is a significant lack of understanding about what vulnerability is in a policing context. However, during the period in which this research was undertaken, there have been many improvements in understanding policing vulnerability through a range of activity, research and national programmes, for example: the Violence Against Women and Girls (VAWG) framework⁶⁴ aims to support police forces to better understand the influences that contribute to VAWG; the Vulnerability Knowledge and Practice Programme (VKPP)⁶⁵ is working on projects to develop the evidence base for vulnerability to improve

⁶⁴ See <https://www.npcc.police.uk/our-work/violence-against-women-and-girls/>

⁶⁵ See www.vkpp.org.uk

practice; the Vulnerability and Policing Futures Research Centre⁶⁶ recognises the complexity of vulnerability and aims to reshape how the police and partner agencies work together in order to reduce harm among vulnerable people; and the Violence Reduction Units that have been developed by most police forces in England and Wales to tackle serious violent crime and support those who are most vulnerable to violence and sexual assaults⁶⁷. The thesis also found that because defining and identifying vulnerability was problematic, the police response is limited and mostly based on the use of PVP referrals which effectively passes the response on to another agency. Therefore, this thesis is weighted more towards defining and identify of vulnerability.

At the outset it might be considered that defining vulnerability would be straight forward. Indeed, there should be a common-sense approach to understanding those who are easily taken advantage of or at risk of harm due to diminished responsibility (Green, 2007). Schroeder and Gefenas (2009, p. 114) discuss a straightforward definition to start a general discussion on what it means to be vulnerable: "To be vulnerable means to be exposed to the possibility of being attacked or harmed, either physically or emotionally". For policing purposes, vulnerability is often a contributory factor for a person reaching crisis and therefore requiring police assistance. This is not always due to a crime event, yet crime plays a role in when and how the police identify vulnerability. The police deal with several calls for service that are not crime related but, often, they are vulnerability related. This is evident in the ratio of calls for services and crime: approximately 20% of calls for service are regarding crime (College of Policing, 2015).

Identifying vulnerability is logically the next step following its definition stage. This is not always straight forward, and a police officer is not necessarily the right person to clinically assess this. This can be due to a lack of experience, knowledge or training (Bartkowiak-Théron and Layton, 2015). Most often dealing with the causes of vulnerability fall out of the remit of policing, but they are often the first to attend crisis

⁶⁶ See www.vulnerabilitypolicing.org.uk

⁶⁷ See <https://www.justiceinspectorates.gov.uk/hmicfrs/glossary/violence-reduction-unit/>

as a 'first-responder' (Bartkowiak-Théron and Asquith, 2012b). As such, they may collect and record information about events they deal with. The recorded data sets used in this research are mixed in their approaches to recording vulnerability. Therefore, this thesis argues for an ecological approach to vulnerability (as presented in chapter 9) to help visualise vulnerability as layers and as a means to improving police responses (Winter, 2017; Hollomotz, 2009). Factors that can contribute to, cause or influence vulnerability are not always or solely physical characteristics. Luna (2009) argued that vulnerability should be conceived as a series of layers, which builds on the ideas of an ecological approach. Converging these ideas of layers into an ecological approach to vulnerability will help police practitioners contextualise vulnerability rather than categorise it. Therefore, improving police knowledge and insight to identify the right response (Keay and Kirby, 2018; Bartkowiak-Théron and Asquith, 2017; 2012; Munro, 2017). But first this chapter will discuss some of the key findings from the research for this thesis. The findings will be broken into sections based on the three key themes of this thesis: defining vulnerability, identifying vulnerability and responding to vulnerability.

Defining vulnerability

The first theme in this thesis concerns how vulnerability is defined. There have been discussions regarding the concept of vulnerability in academia which has grown significantly during the last decade (see literature review). During the same period, supporting vulnerable people has been a significant policy shift for many police forces globally (Asquith and Bartkowiak-Théron, 2021; Aliverti, 2020; Bartkowiak-Théron and Asquith, 2014; 2017). A consequence of this has led to confused front line staff, unsure of what dealing with vulnerability means (HMICFRS, 2015). Defining vulnerability has been a nebulous task and fraught with disagreement and confusion by practitioners, as clearly shown in the focus group. Meanwhile, senior leaders have championed the notion that tackling vulnerability can have a positive impact on reducing long-term demand (Boulton et al., 2017). However, defining vulnerability in a policing context has been somewhat blurred, which then obfuscates the policing response, and officers have been unsure of what is expected of them (see chapter 5). This questions whether a definition is actually needed (Keay, 2021 in Asquith and Bartkowiak-Théron, 2021).

The idea that defining vulnerability is difficult and is a consistent theme in this thesis that is supported across the literature. Findings from this focus group questioned the term, with comments ranging from “it [vulnerability] is a subjective term” to “there is confusion over the terms vulnerability, risk and harm. There is an assumption they are much the same but are distinctly different” (see chapter 5). The focus group participants found that there were several factors (e.g., being a victim of crime) that could be linked to vulnerability (Paterson and Williams, 2018; Walklate, 2011). It was unanimous amongst focus group participants that anyone could be vulnerable, and this created confusion as to where services should be directed or what was, in some cases, expected of the police officers. It is unclear whether an actual definition would add any value at this point for operational purposes. Most felt that a definition didn’t or wouldn’t alter the confusion or alter practices. As vulnerability can manifest from a myriad of layers (Keay and Kirby, 2018; Luna, 2009) any definition has the potential to miss some form of disadvantage, and yet, definitions and categories have tried their best to cover every type of vulnerability, and this can impede operational activity. This is exacerbated with other terms being used interchangeably with vulnerability: risk and harm. Until recently vulnerability has received less attention than risk (Brown, 2013). With growing research and national attention (e.g., VAWG programme (College of Policing, 2021)) there is a greater emphasis on vulnerability and improving knowledge about what it is. Focus group participants in this study were clear on 2 key points: understanding different vulnerabilities is needed and what was expected of staff when policing vulnerable people. This further supports the proposal of an ecological approach to vulnerability.

Furthermore, findings showed that there was some disagreement regarding the police involvement with vulnerable people. Some of the participants suggested that dealing with vulnerability was not necessarily a specific police role, but they did concede that the police were there to protect others from harm. During the discussions it was apparent that a significant omission in the desire to tackle vulnerability was from clear leadership about operational expectations. Staff noted that they were expected to design new processes for identifying vulnerability but there was no template from which to work. This is contrary to the expectations of the

HMICFRS⁶⁸ who regard success being the ability at “identifying, protecting and supporting those who are vulnerable is a core indicator of its overall effectiveness” (HMICFRS, 2015, p. 1). Yet even the HMICFRS noted that there was a variety of ways in which all police forces were defining, identifying and responding to vulnerability (HMICFRS, 2018a; HMICFRS, 2015). As a concept vulnerability is essential to policing and it should be regarded as a predictor to future harm, i.e., when someone is recorded as being vulnerable the next step would be to ask, ‘vulnerable to what?’ This simple step helps consider what action or support is required, which will most likely involve agencies other than the police. Practitioners, and the literature, unanimously believe that multi-agency action is the most appropriate response to tackle vulnerability.

Managing complexity: understanding what vulnerability is

Asquith and Bartkowiak-Théron (2021, p. 51) note that “vulnerability sits firmly at the intersection of law enforcement and public health”. Indeed, in 2017 the NPCC (National Police Chiefs Council), the College of Policing and Public Health England were the key agencies that signed up to the policing, health and social care consensus (College of Policing, 2021b). This was a significant step towards an acceptance that policing practices need to put vulnerability at the heart of their mission. The College of Policing (2021, p. 1) note that policing is committed to:

“Prevention and early intervention, recognising that the majority of police work is rooted in complex social need. One way of doing this is taking a public health approach in policing.”

This commitment was supported by the development of a series of discussions on public health approaches to improving the policing response (Christmas and Srivastava, 2019), which also dovetails the Policing Vision 2025 (NPCC, 2016). The Policing Vision 2025 underlines a strategic approach to define how policing needs to adapt to meet communities that are “increasing diverse and complex” (NPCC, 2016, p. 1). Herrington and Serbie (2021) have noted that the fundamental role of policing

⁶⁸ Her Majesty’s Inspectorate of Constabularies and Fire and Rescue Services.

has been challenged in recent years (in particular during the Covid pandemic). This is built on earlier work that recognised that policing is changing across the globe: there is a “shared recognition that policing is ever-more complex” (Herrington and Colvin, 2016, p. 7). How this is managed is pivotal to interpreting theory and improving practice around policing vulnerability. Practitioner feedback during the research for this thesis was clear that there was a lack of organisational direction about expectations of front-line staff when dealing with vulnerability. Indeed, leadership and dealing with complex issues has been the topic of recent academic discussion and research (Herrington and Serbie, 2021). Policing styles of leadership is based on a command-and-control structure that ensures operational policing is accountable (Herrington and Serbie, 2021; Grint, 2010c). Herrington and Colvin (2015) posit that making progress on complex problems still requires leadership but not necessarily authority, as complexity increases, the chances of one person with the answers decreases. Therefore, a command-and-control leadership model may arguably be redundant here. This means that should the police move more towards a public health approach to tackling complex problems, i.e., vulnerability, it would require a shift in traditional police command structures. Tackling complex issues such as vulnerability requires shared leadership (Herrington and Colvin, 2016): it is a group process of shared responsibility and should not rely on police-led responses. The police response, traditionally a lead one, needs to respect the support from other agencies and take a lead from them, where appropriate, even in the analysis of problems. As such, it is recommended that this research is used to support organisational leadership in improving how policing can tackle complex problems with other agencies and the community (Herrington and Colvin, 2015). This would certainly be welcomed by police practitioners.

Vulnerability as a ‘wicked problem’

Approaching vulnerability as a complex or ‘wicked problem’ can help resolve confusion as experienced by practitioners (McCall and Burge, 2016). The practitioners in the focus group felt that they were under pressure to identify solutions for vulnerable people without understanding individual needs. Wicked problems, such as vulnerability, have no simple solution because they are complex as opposed to complicated (Addidle and Liddle, 2021; Herrington and Colvin, 2016;

McCall and Burge, 2016; Grint, 2010a). Complicated problems are regarded as problems that may have many interconnected parts that require a certain amount of skill and knowledge to take apart or put back together, such as a mechanical engine (Herrington and Colvin, 2016; Rittel and Webber, 1973). Herrington and Colvin (2015, p. 9) discuss the difference between problem types as:

“A bicycle is complicated. It has many moving parts, but they all work in predictable, interconnected, ways. If you take a bicycle apart piece by piece you can put it back together again, and with some modifications it may even work better. Clearly, the same is not going to be the case for the poor frog. We might remove a small number of ‘bits’ and the frog will still ‘work’ for a short period of time, but the system as a whole will have been irrevocable affected in many ways. It is the same with complicated and complex problems.”

They also add that “police organizations are well versed in responding to crises and complicated problems” but “what police organizations deal with is actually complex” (2015, p. 9). The important issue for policing here is the recognition that different types of problem require different types of management and leadership (Grint, 2010a; 2010b). Grint (2010b, p. 170) notes that “what kind of problem you have depends on where you are sitting and what you already know”. In regard to policing vulnerability, the end goal here is (relatively) simple: to deal with vulnerable populations requires coordinated and strategic leadership across a number of key invested organisations (Addidle and Liddle, 2021; Rittel and Webber, 1973). There is growing investment and research that can influence and inform the policing of vulnerability.

Responding to complexity requires innovation, which in the current climate, can be partly achieved through wider adoption of evidence-based policing (EBP) (Sherman, 1998). In addition, this thesis argues that dealing with vulnerability needs to also adopt problem-oriented policing approaches. Whilst POP has been increasing in stature more recently the basic philosophy provides a relatable and understandable direction for policing: concentrate on the *ends* and not the *means* (Eck, 2019; Goldstein, 1979). Goldstein (1979, p. 236) described this as the “means over ends syndrome”: police forces placed more attention on organisational matters and

operating models (i.e., how to do police work), rather than focussing on the impact of policing (i.e., the outcome of doing police work). There are parallels of this argument with how police forces have been tackling vulnerability. This may have contributed to practitioner confusion as discussed in the focus group. If decision making were to shift further down the command-and-control structure to the front line, this may go some way to alleviating some of the issues identified by the focus group in this thesis. This thesis suggests that police leaders need to provide a more detailed understanding of what their expectations are from front-line staff when dealing with vulnerable people. This should start by influencing a response that can have a direct and immediate impact on those who are victimised. This thesis argues that, in a policing context, victims of crime are the most vulnerable.

Identifying vulnerability

The second theme of this thesis is how the police identify vulnerability. It has been established in this thesis that there are at least 3 ways in which the police might identify vulnerability. But first there must be caution levelled at suggesting the police *identify* vulnerability. In all 3 data sets, police *recorded* vulnerability: this is different from *identifying* it. The vulnerable qualifier used to record vulnerability may be used to place a warning qualifier on an address for future reference/ response (NPIA, 2011). In relation to crime recording, the presence of a vulnerable qualifier triggers an automated email to victim services that support may be required. In contrast, PVP referrals (see chapter 8) are investigated through the MASH and are therefore more likely to identify (varying degrees) of vulnerability, which are then considered for further action by several partner agencies. As the first responder the police officer is exposed to a situation in which vulnerability is either a contributory factor or even a consequence of the event. However, the officer will most likely not have the experience, skills, or mandate for investigating the vulnerability further. Hence the general requirement for specialist services/ support, e.g., child social care or mental health services. The details in the PVP referral form offer more insight and opportunities for research and analysis. Therefore, the PVP referral data is more likely to provide a detailed picture of potential vulnerability than either recorded incident data or recorded crime data.

What can be learnt about vulnerability from police recorded data

This is, at the time of writing, the first in-depth study of police recorded data and vulnerability. The recorded data allowed this research to explore what the police record and consider to be vulnerability. The police recorded data is also used to inform the College of Policing and HMICFRS inspections (HMICFRS, 2021). There is a wealth of information recorded by the police. However, the three recorded data sets used for this research were found to be inconsistent in the information they contain with regards vulnerability. This meant that it wasn't possible to explore similar themes across all data sets. The table below (table 10.1) has been drawn up to show how each data set records vulnerability. This clearly shows the different types of qualifiers and markers used for each data set. Surprisingly, the 3 data sets do not consistently record vulnerability, nor do they fully correspond with each other, i.e., not all PVP referrals have a recorded incident attached that contains a vulnerable qualifier (see chapter 8). If each data set were used in isolation there would be different results regarding vulnerability. The most comprehensive data set was the PVP referrals.

Table 10.1: Recorded data and vulnerability markers.

Recorded Incidents		Recorded Crime		PVP	
Chapter 6	Sample p.125	Chapter 7	Sample p. 147	Chapter 8	Sample p. 172
Vulnerable qualifier	Mental Health (MH)	Vulnerable qualifier	Yes	Event description	Domestic Abuse (DA)
	Vulnerable Person (VP)		No		Vulnerable Adult (VA)
	Vulnerable Child (VC)				Vulnerable Child (VC)
	Vulnerable (VU)				
				Risk Level	Standard, Medium, High
Type of event	Incident Class	Type of event	HOC (Home Office Crime Classification)	Type of event	Referral reason

However, despite the data sets being varied, analysis of them offered an insight into how police practitioners might record vulnerability. This gives the police an opportunity to develop their knowledge around vulnerability and support what they can learn about vulnerability. To further this, the thesis recommends that consideration should be given to how different data sets can be linked formally and consistently to maximise analysis and policing insight. This section will now discuss some key findings from the recorded data.

Vulnerability and gender

The findings from the analysis showed that there was a significant gender split with regard to those who are more likely to be recorded as vulnerable. The findings showed that for crime 55.7% (n=6,484) of victims recorded as vulnerable were female (see chapter 7) and the PVP data showed that 66.5% (n=37,038) were female (see chapter 8). However, wider research notes that victimisation generally tends to be higher for males than females (Kruttschnitt, 2013; Davies, 2011; Walklate, 2004). Walklate (2004) argues that this picture is skewed due to crime type, with males more likely to be the offender and victim in certain crimes, e.g., violent crimes, and this can dilute conclusions of victim profiles. Indeed, gender-based violence or gender-based victimisation are mostly or only experienced by woman and girls (Bricknell, 2016; Davies, 2011). Further, Walklate (2004) argues that through a feminist lens, researching the spectrum of crime types enhances our understanding of the sex ratio and that women are significantly more likely to be victims of certain crimes, e.g., domestic violence, and this can get lost in discussions around general victimisation. Indeed, findings in this thesis suggest that police recorded data suggests vulnerability is gender-based. Analysis of the recorded data shows that females are more likely to be recorded as vulnerable than males. This questions the understanding of vulnerability by the officer or call handler assigning a vulnerability qualifier, i.e., if only certain victims are given a vulnerability marker. This should not diminish the attention required by the victim as they will be deserving of the support. Neither should the recording of vulnerability flatten different victim experiences (Munro, 2017). When recording vulnerability, the data needs to ensure that the police can build the best understanding of vulnerability possible with a view to offering the most appropriate response and service.

Vulnerability, day and time

Initially, it appears as though there was a difference in the data sets regarding day of week and vulnerable related events. Recorded incident data suggested that vulnerable related incidents peaked over the weekend (Friday through to Saturday). Generally, this is consistent with findings by Towers et al. (2018) who found that crime was prevalent on Fridays and violent crimes prevalent on Saturdays (they also noted that crime was less prevalent on Sundays). Andresen and Malleson (2015) found that recorded crime had distinctive temporal patterns during the week, and this varied by crime type. In contrast, this thesis showed that when the data was filtered to examine vulnerable-related incidents reported by the victim the number of cases is consistent across the week. This is a similar pattern to recorded crime data and PVP referral data which showed that vulnerable-related events were consistent and even throughout the week. This is a significant finding: that calls for service from vulnerable people are consistent throughout the week.

Recorded incidents and PVP referrals suggested that 3pm was a peak time for calls for service and PVP referral data showed an additional 10pm peak. This thesis posits that this finding fits in with a routine activities approach towards criminal/ anti-social behaviour (Cohen and Felson, 1979). Felson and Poulsen (2003, p. 595) also suggested that “crime varies more by hour of day than by any other predictor we know. Such variation is analyzed all too seldom”. They propose an approach to redefine how police agencies may analyse and forecast crime based on time, which involves analysis of crimes by crime type (Felson and Poulsen, 2003). Ratcliffe (2002; 2000) adds that there have been significant issues with police recorded data when analysing temporal patterns. He does note, however, that police recorded data tends to reflect the routine activities of victims, and therefore this may support police measures in supporting vulnerable people (Ratcliffe, 2002). It is not within the scope of this thesis, nor would it be practical to assess each crime classification by vulnerability and by hour of day, but this may be an opportunity for future research. Based on the analysis in this thesis, it is recommended that the recorded PVP referral data is the more suitable data set for more effective police time management in dealing with vulnerable people.

Vulnerability and place

The importance of place has become a key theme in policing research (Eck and Weisburd, 2015; Eck and Weisburd, 1995; Brantingham and Brantingham, 1995). Testing the hypothesis that vulnerability more likely occurs in low socio-economic status (Appleton, 1994) areas was supported by the results in the crime data. The findings in this thesis support the notion that the location is linked to vulnerability. Whilst Rogers and Coliandris (2015) suggest that more work is required to identify better indicators of vulnerability other than those based around socio-economic factors, health studies have demonstrated how socio-economic status in relation to residential properties plays an important role when professionals identify vulnerability (Mulcahy, 2004; Appleton, 1996; 1994). Further, it is worth noting that accrued marginalisation combined with location factors and personal factors (e.g., health and wellbeing) can amplify vulnerability (Schroeder and Gefenas, 2009). This also suggests that the layered effect of vulnerability can increase a person's overall vulnerability and place is a key factor. Indeed, this is an area for police to concentrate their resources. In addition to this, police approaches to problem-solving include place/ location within the PAT (problem analysis triangle) as a means to develop an understanding of the attributes of a location can influence criminal or anti-social behaviour (Ratcliffe, 2019; Brantingham and Brantingham, 2008; Clarke and Eck, 2003). It is argued that these approaches can also be applied to policing vulnerability (White and Weisburd, 2018).

Vulnerability and repeat victimisation

All 3 data sets show high levels of repeat victimisation for both person and for place. Repeat victimisation was significantly higher in the PVP data. It is important to note the impact that repeat victimisation can have on the health of those repeatedly targeted. Winkel et al. (2003, p. 88) note that the:

“Vulnerability perspective considers repeated exposure to stressful events as a risk factor. It holds that every stressful life-event depletes available coping resources and thereby increases vulnerability to subsequent stress”.

Skogan (cited in Brady, 1996) argued that repeat victimisation was one of the most important criminological insights of the 1990s. Research has shown that repeat victimisation occurs relatively quickly after the first victimisation (Ignatans, 2020). This suggests that victims are vulnerable in several ways following an initial victimisation and therefore, argues that police interaction/ support is crucial at this point. Police recorded crime and recorded incidents report events as if they are isolated events. Yet this is not always the case. Indeed, not only does it neglect to identify those repeatedly victimised, but it also misses attempted crimes against the same target (Farrell and Pease, 1993). This raises issues for police practitioners in identifying those who are repeatedly victimised, and, as shown in this thesis, existing data systems make it difficult to identify repeat victims. Pease et al. (2018) have questioned whether tackling repeat victimisation is on the police agenda, despite tackling repeat, related or recurring issues being at the forefront of policing approaches to reducing community harm (Eck, 2019; Ratcliffe, 2019; Goldstein, 1977; 1979). This thesis found it difficult to identify repeat victimisation and to do so meant re-coding existing data. This thesis argues that victimisation should be a key priority in targeting vulnerability within a policing context. This means that police forces need to adopt systems that can identify levels of repeat victimisation and support vulnerable people.

Gaps in recorded data

The recorded data sets are clearly police-focussed. This is to be expected due to the levels of governance that determine what is recorded, i.e., NCRS⁶⁹, HOCR⁷⁰ and NSIR⁷¹ (see chapter 4) (Brimicombe, 2016). However, dealing with vulnerability goes beyond just crime and police-related matters. The police encounter vulnerability in a range of settings as shown in the literature and the research for this thesis. Yet not all vulnerabilities are captured in the recorded data. For example, homelessness as a significant vulnerability in which the police encounter is not covered by the

⁶⁹ National Crime Recording Standards

⁷⁰ Home Office Counting Rules

⁷¹ National Standard of Incident Recording

recorded data variables (Bartkowiak-Théron and Asquith, 2015; Bartkowiak-Théron and Corbo Crehan, 2010). This thesis recommends that police forces and agencies responsible for governing and inspecting police forces need to develop recording standards and practices that take account of this wider range of vulnerabilities. This should include findings from the growing number of research streams such as the Violence Against Women and Girls (VAWG) framework, the Vulnerability Knowledge and Practice Programme (VKPP), and the Vulnerability and Policing Futures Research Centre, as mentioned earlier.

Using police recorded data in an ecological approach for responding to vulnerability

The literature is clear when discussing vulnerability: there are a number of attributes and social determinants that can play a part in regard to vulnerable people (Asquith and Bartkowiak-Théron, 2021; Marmot, 2005; Bradshaw, 1972). Some level of care must be made when drawing conclusions from police recorded data alone. Wider information is required to determine why individuals might be vulnerable. The ecological approach to vulnerability (chapter 9) bridges the divide between the concept of vulnerability and the operational practicalities of identifying it from the recorded data (Bartkowiak-Théron and Asquith, 2012b). This approach aims to help reduce confusion of what vulnerability is, break down silo thinking by practitioners and show layers of vulnerability (Luna, 2009). This can then draw attention to the numerous determinants of vulnerability, which could otherwise be missed by policing, especially if police agencies are only guided by their own data. The recorded data, as discussed in this thesis, shows that recorded police data does not provide an holistic picture of vulnerability, nor does it truly identify it. The police data suggests that there is some level of vulnerability recorded against an event or those persons involved. Bartkowiak-Théron and Asquith (2012) note that all police encounters involve some level of vulnerability. If this is the case for policing vulnerability, then identifying specific qualifiers could become problematic. Kipnis (2001) argued that a traditional focus on discrete vulnerable subpopulations needs to give way to a more analytical approach that helps identify specifics or 'sub parts' for each alleged vulnerable group, as members of vulnerable populations may exhibit a number of vulnerabilities. Therefore, in a policing context, an ecological approach to

vulnerability should help visualise the concept of vulnerability as well as appropriately record those sub-parts of vulnerabilities. This in turn can help identify an appropriate service with which to direct action towards, or even for further data collection to improve an understanding of the person's needs (Harris and Hodges, 2019; Luna and Vanderpoel, 2013; Ellens and Glasby, 2011).

Responding to vulnerability

The final theme explored within this thesis is how the police respond to vulnerability. Vulnerability and vulnerable people permeate throughout policing interactions and police business (Asquith and Bartkowiak-Théron, 2021). From calls for service due to someone being in crisis (Bartkowiak-Théron et al., 2017) or through to organised crime groups targeting young people to distribute drugs (Windle et al., 2020; Moyle, 2019; Coliandris, 2015), understanding and dealing with vulnerability is a growing area of complexity for policing. Responding to vulnerability has always been a key element of policing but until recently it has not been the focus of detailed attention. Policing has been slowly moving away from traditional methods of crime control, mostly enforcement and short-term tactical responses, to dealing with longer-term, strategic and complex problems (Kirby, 2020; Herrington and Colvin, 2016). All of which is relatively new and therefore an area worthy of academic research.

The question 'what are the police for?' has echoed through research since the days of Sir Robert Peel (Millie, 2014; Bittner, 1991; Goldstein, 1977). Some of the most common responses include crime prevention (Sherman and Eck, 2003), fight crime (Friedman, 2020), to control crime (Loader, 2014), and to enforce the law (Reiner, 2010). Research is now nudging towards the notion that the police need to mobilise more as social workers and public health interventionists (Asquith and Bartkowiak-Théron, 2017). However, to understand 'what are the police for' research must consider what the police respond to. The recorded incident data gives an insight into what calls for assistance are about. Incidents where there is suggestion of vulnerability show that 'concern for safety' was the top reason for calls that require a response (see chapter 6). This equated for 30% of all recorded incidents where there was a qualifier for vulnerability and demonstrates that vulnerability is not necessarily crime related. As indicated in this thesis vulnerability is a predictor to harm and should be considered as such. The police response should therefore be looking to

mitigate the potential for harm for those deemed vulnerable, which may also mean considering vulnerability in its widest sense and not simply how it is related to crime classifications. The value of recorded data is not just to satisfy HMICFRS inspections or data audits, but to prevent crime and reduce victimisation and vulnerability. Additionally, there needs to be some self-reflection by the police in recognising the adverse impact that illegal police behaviour and portrayal can have on vulnerable people (Decker et al., 2019; Helsby et al., 2018). This has the potential to have a negative impact on hard-to-reach groups and could be a significant gap in police recorded data (Buil-Gil et al., 2021). Therefore, the police should address research findings when developing their response to vulnerability. They have a duty of care and responding to vulnerability should be essential in their mission, but they can do it alone.

In the last few years there has been a growing realisation that “the police cannot have a major impact on crime because the origins of crime lie outside of its control” (Van Dijk et al., 2015, p. 91). This was a recurrent theme in the focus group and practitioners responded to the questions ‘why should we police vulnerability’ and ‘how should the police do it’ with mixed concerns. Practitioners felt that “it is our core business: protect people from harm” but recognised that it should be “in partnership not silo’s” as “vulnerability cuts across all responsible authorities. A victim doesn’t distinguish themselves and their needs by the agency” (see chapter 5). Indeed, dealing with the causes of vulnerability is beyond the remit of the police alone (Wood, J.D., 2020). Hence, this thesis emphasising the use of PVP recorded data as a means of ‘responding’ to vulnerability, even when this means forwarding on to another agency. This is where partnerships and multi-agency working and intelligence sharing becomes essential (Christmas and Srivastava, 2019; White and Weisburd, 2018).

Policing partnerships, vulnerability and health

Dealing with vulnerability requires a strategic partnership between the police and health agencies. Bartkowiak-Théron and Asquith (2017) argued that there has been a divide between police and public health services. Similarly, Schuller (2013) noted that there has been a discord between policing and health services that is a by-product of the Crime and Disorder Act 1998, which does not explicitly include health

services as a responsible authority in reducing crime and ASB. Therefore, police and community safety policy has developed (since 1998) without a direct link to health services. When health and police do come together it is most often for operational matters such as safeguarding as opposed to strategic collaboration in developing preventative measures (White and Weisburd, 2018; Bartkowiak-Théron and Asquith, 2017). A conceptual understanding of, and dealing with, vulnerability mean working more cohesively with a range of other agencies. The police are often the first on the scene and therefore are more likely to identify those in crisis or with need of special measures/ service. However, developing multi-agency strategy targeted at tackling vulnerability is often hindered by policy, bureaucracy and competing organisational demands. This thesis found that practitioners regarded dealing with vulnerability to be a multi-agency approach, but silo-working was a barrier to successful partnership working. The use of the growing research, including this thesis, around policing vulnerability should be used to influence policy, practice and education. It is recommended that key findings from this research are used to update the College of Policing indicative content used under the PEQF (Wood, D.A., 2020; Williams et al., 2019). This will help educate new policing students and should improve how the police develop future approaches to tackling vulnerability.

Implications for theory

The analysis for this thesis has filled a gap in the literature. This is a unique study that has used police recorded data to explore how they record vulnerability and what can be learnt from this. This analysis suggests that police recorded vulnerability is linked to routine patterns of everyday life (Cohen and Felson, 1979) and calls for service from those recorded as vulnerable are consistent throughout the week. This suggests that vulnerability is not simply linked to specific days or times as one might expect. For example, previous research has shown that police demand for violent crime and sexual assault are more prevalent in the evening at weekends (Towers et al., 2018). However, regarding crime related vulnerability, females being the victim of violence or sexual assault within a residential setting were significantly more likely to be recorded as vulnerable. These findings do not diminish the fact that this group are deserving of this and should receive appropriate support. Nor should recorded data be used to flatten the individual experiences of victims (Aliverti, 2020). But the

analysis of data suggests there are gaps in recorded data compared with the literature. There should be more acknowledgement that vulnerability extends beyond certain vulnerable groups. This needs to be reflected in policing research, police force inspections and governance. How the police record vulnerability may influence service delivery and access to support services. Therefore, there needs to be a more acute recognition that vulnerability goes beyond crime categories and police data recorded should be amended accordingly.

The concept of vulnerability in a policing context is an essential and useful one. A key theme running through this research is that contemporary policing involves managing many complex problems that can result in harm to individuals, families and communities. This research suggests, which is in keeping with existing literature, that new methods of policing should align with public health and social care policy to tackle complex problems. The many determinants that branch as attributes of vulnerability all stem from physical and mental health issues and can be exacerbated by social and environmental factors (Keay and Kirby, 2018; Asquith and Bartkowiak-Théron, 2017; Luna, 2009). Developing the theory around vulnerability and researching vulnerability in a policing context can help better understand how the police perceive, record, and respond to vulnerability. This thesis, from a theoretical position, posits that policing research and policing as an organisation must maintain the concept of vulnerability at the forefront of their mission.

Implications for practice

The analysis for this thesis has identified areas to improve police practice in dealing with vulnerability. Police forces refocussed their attention to vulnerability during austerity when there was a pressing need to manage an increasing demand with reducing resources. These aims have been a step change for policing which has confused front-line police staff who have been reorganised to deal with vulnerability. This is not new in policing. 40 years ago, Goldstein (1979) remarked that policing had lost its focus regards the *ends* (outcomes) of its mission by focussing too much on the *means* (police structures). This thesis posits that policing vulnerability has been focussed on how the organisation functions (i.e., 'the means', Goldstein (1979)) rather than what the outcomes should be (responding to vulnerability). This has led to confusion amongst police practitioners on who or what they should be targeting.

Policing vulnerability would benefit from a problem-oriented approach to organisational change. Initially, this was Goldstein's intention: to refocus the policing mission (Goldstein, 2018; 1990; 1979). This should be applied to the policing of vulnerability. There is recognised uncertainty by front line staff regarding who is vulnerable, and by reassessing the ends of policing vulnerability there should be an improvement in how this relates to practice. Whilst the police may be the first 'on the scene', they are not necessarily equipped with a range of public service skills to manage complex vulnerability (Bartkowiak-Théron and Asquith, 2017; 2012). Nor should they be expected to. To support policing practice, this thesis proposes an ecological approach to offer police practitioners the ability to consider the layering of vulnerable traits.

Police recorded data can help forces ascertain what vulnerability is in a policing context. Therefore, it is essential that police recording, and IT systems are structured in a manner that improves recording and analysis of recorded vulnerable data. At present there is room for improvement. There were at least 3 ways of recording vulnerability in police systems. Vulnerable qualifiers were applied to recorded incidents and recorded crimes and yet there is no direction, guidance, or training as to when these should be applied or what constitutes vulnerability, and in the words of one focus group participant "... anybody can be vulnerable" (see chapter 5). It has already been recognised that the function of the police is more than dealing with crime and the police should be recognised as being involved as "public health interventionists" (Bartkowiak-Théron and Asquith, 2017, p. 5). The police deal with all manner of vulnerable people. However, vulnerability is defined by categories in that some groups will be 'in' and some groups will be 'out' based on the boundaries of any given category, e.g., homeless people or drug users (Luna and Vanderpoel, 2013). Therefore, there is a requirement to ensure that recording vulnerability is not defined by crime classifications but takes account of the findings from this research to improve existing policies and recording standards about vulnerability. More explicitly, data recording must improve the recording of repeat victimisation. This thesis argues that repeat victimisation should be a priority for policing approaches to vulnerability. Analysis showed high levels of repeat victimisation across all 3 data sets but identifying and accessing this data was difficult due to current recording

practices. Any changes to data recording must account for repeat victimisation and alert police forces.

Original contribution to knowledge

At the time of writing, this thesis is the first study of how the police define, identify, and respond to vulnerability and it offers several original contributions to knowledge. The use of police recorded data cannot be understated. This thesis offers a unique insight into how the police conceptualise and record vulnerability. Furthermore, comparing practitioner views of how they police vulnerability against the recorded data has identified new knowledge that can be used to develop theory and improve practice regarding how the police understand and respond to vulnerability.

1. This thesis demonstrates that theoretically, the concept of vulnerability is essential to policing. Everyone is vulnerable, and some more than others, particularly those who have interactions with the police. The police cannot provide a service for everyone, and they need to rationalise who they record and support as vulnerable. Failing to do so will flatten vulnerability into discrete siloed categories rather than recognise that individual experiences require a tailored service dependent upon need. This thesis makes recommendations that should be used to inform and develop police knowledge, education, and practice.
2. A significant contribution to knowledge is the understanding of how the police record vulnerability in their data. To date, this is the first time that this has been researched. The analysis of police recorded data demonstrates significant insights into how vulnerability is recorded in various data systems. This thesis has shown that there are at least 3 different approaches to recording vulnerability and that linking data is problematic. However, this thesis has managed to do this through re-coding data and show that recorded vulnerability is consistent across the 7-day week. It also shows that recorded vulnerability is linked to routine activities theory, hence a consistent demand for police attention.

3. This thesis highlights that the police do not *identify* vulnerability, but *record* vulnerability. As a first responder, the police often encounter vulnerable people, but their understanding of vulnerability requires further support if they are to record it correctly. The PVP referral data was the most comprehensive data set to use for analysis of policing vulnerability. However, in practice this data set was used as a means for transferring responsibility of recorded vulnerability to other agencies. This highlights the importance of working in partnership with a range of agencies to address the needs of vulnerable people.
4. Analysis for this thesis exposes repeat victimisation as being overlooked as a category of vulnerability despite the literature demonstrating the harmful effects it can have on victims. Further, repeat victimisation is a theme of vulnerability that can be addressed directly by policing. However, this thesis found it difficult to explore repeat victimisation due to inefficient police data systems. Research for this thesis had to re-code data fields in order to explore themes of victimisation and vulnerability. This thesis argues that repeat victimisation should be placed centre-stage in any policing policy and discussions around vulnerability. It is recommended that data systems need to be enhanced to ensure appropriate data and information is available to support practitioners and identify victims more efficiently.
5. Vulnerability is a useful and essential concept for policing. This thesis posits that vulnerability should also be used as a predictor for future harm. With the recording of vulnerability there should be a requirement to question 'vulnerable to... what?'. This leads practitioners to then consider the potential harm from being vulnerable and what is required to mitigate such harm. Therefore, those responding to vulnerable individuals should be considering a 'need for... something' (e.g., service) to mitigate the vulnerability. This will help reduce the confusion identified by practitioners and improve the policing response along with more cohesive partnership working.
6. It offers a unique insight into the operational practices of a police force and explores the views and experiences of police practitioners who have been

working with vulnerable people. This thesis has evidenced that policing vulnerability has created confusion amongst practitioners. This is due to how the police have concentrated on the *means* as opposed to the *ends* of policing business. Goldstein (1979) was able to show that policing had lost its way and he developed problem-oriented policing and the 'means over ends' debate as a way of rationalising the police mission. Findings from the focus group, and supported in the literature, show that this is occurring with policing vulnerable people. The police have been looking at a variety of ways of dealing with vulnerability through a series of measures, all of which encapsulate the *means*, i.e., how the organisation operates. Through this approach policing has lost sight of the end goal, i.e., positive outcomes for vulnerable people.

7. In response to these contributions and new findings, this thesis presents an ecological approach to vulnerability that has been developed from this research and the literature. This thesis argues that use of this model will offer a solution to some of the issues highlighted in this research. The model helps deconstruct the complexity of vulnerability into tangible parts that can educate and support how police practitioners view vulnerability. That is not to say that vulnerability can be so readily simplified. However, for policing purposes it provides a structured approach to identifying vulnerability and explaining a range of related phenomena that can identify contextual points for intervention. This can support multi-agency working and promote improved outcomes for those deemed vulnerable. Further, the model can be used to improve data collection regarding vulnerable people, which will in turn improve an evidence base to develop policy and practice.

Limitations of research

Research is not without its flaws, and it is important to note the limitations within this thesis. Firstly, it should be noted that the quantitative data has provided a rare insight into how the police record vulnerable people. It is a strength of this research to use three different data sets of recorded police data to explore the research topic, which has not been covered elsewhere in the literature. However, in the context of

vulnerability, the data is only part of the puzzle. As identified in this thesis, police recorded data is not always useful for research. As administrative data it is collected for a specific purpose. As such, data has had to be recoded to conduct this research. More so, this hampers the police's own desires to better understand the people that they deal with.

The data used for this thesis was from one police force. Not all police forces use the same systems and therefore recorded data may vary between forces. Therefore, some of the findings presented here may not reflect other areas. In addition, wider (non-police) data and intelligence can provide improved business insights into vulnerable people, particularly case histories and life episodes that have significant contribution to them being regarded as vulnerable or requiring specialist support (e.g., drug and alcohol services).

This thesis has shown that repeat victimisation was found to be a significant factor in all three recorded data sets. However, with the data sample being limited to one year, calculating the RV rate is hampered by the 'time effect window' (Farrell and Pease, 1993). The 'time effect window' refers to the period of observation (i.e., the data sample). Some incidents will be repeat incidents or may even be linked to future incidents, but this will be missed due to the period of observation. Therefore, repeat victimisation will most often be "under-counted, and single-incident crimes are over-counted" (Farrell and Pease, 1993, p. 25). This suggest that levels of RV shown in the data chapters will be a minimum level due to previous/ future victimisation incidents.

The research for this thesis was solely dependent upon secondary data sources and police recorded data does have some shortcomings, such as the 'dark figure of crime' (i.e., unreported crimes and incidents) (Maguire, 2007). The use of administrative data for research does not always help find the answers sought by the researcher, despite significant recoding. When explaining how the police service collects and uses data, it is helpful to describe some basic information. The majority of police data can be classed as "process-generated data" which serves administrative rather than research purposes (Diekman, 2009, p. 653 cited in Von Gunten et al., 2014), and the quality of this data is affected by two points. First, 'discretionary procedures' determine whether individuals (be they victims, witnesses

or police officers) decide to report or record an incident, as often this does not always occur. Secondly, institutional practices determine how this data is actually categorised (May, 2001). These two issues can influence the type of data that is collected, how it is stored, and the ability to retrieve it. It means that whilst the police harvest a considerable amount of information it isn't always appropriate for research purposes. Future researchers will need to clearly define the data they require and consider recoding of data as a key aspect of their research designs.

The majority of analysis used on the quantitative data sets was bivariate analysis (Rees, 1995). The analysis was conducted to explore each data set. Bivariate analysis can help infer suggestions about the data (Bloch, 2012). For example, chi-square tests can be a relatively quick means of assessing if there is statistical significance within the data (Bloch, 2012; Rees, 1995). However, bivariate analysis can be a limiting factor in data analysis. Seale (2012c) notes that multivariate analysis offers more direction with regards causal explanations in the data. Multivariate analysis across the 3 data sets in this research was restricted due to the constraints in how the administrative data is stored, i.e., in different databases. It is recognised that conducting multivariate analysis would present a greater understanding of the available data. However, in the case of this research, the analysis conducted met the aims of the research question. Future research should consider how police data is collected, recorded, and stored in order to develop more robust methods of research.

Vulnerability in policing can seem like a 'chicken and egg' scenario, i.e., what came first? Was it some form of vulnerability that contributed to police interaction or demand for service or was it the police interaction that created or exacerbated some form of vulnerability? This may have been stimulated by experiences of going through the criminal justice process or from being a victim of crime. Research has shown that the impact of being a victim can have a significant impact which varies dependent upon the reason for victimisation (Winkel et al., 2003; Winkel and Denkers, 1995).

Therefore, the researcher can only comment on aspects of the research through the lens by which the data was collected. In this case it is through a police lens. Data from other agencies would have helped better understand some of the vulnerabilities

held by those in contact with the police where there is a crossover. However, where possible, this has been covered by the available literature.

Considerations for future research

This thesis explored how vulnerability is defined, identified and responded to but, due to the confines of this research, it has not considered the transitional nature of vulnerability through the criminal justice process. During this research new questions have emerged with each deserving further academic study. Vulnerable people have been the subject of academic study at various points with criminal justice (Dehaghani, 2021; 2019; 2017; Ewin, 2015). Vulnerability is not necessarily a fixed attribute and there is limited research about how vulnerability alters as people traverse the criminal justice process. It would be of interest to explore how vulnerability alters through the CJ process or even following some form of police interaction or being a victim of crime.

This thesis has presented key findings from analysis of recorded data that was collected by the police. This has assessed how the police might identify and respond to vulnerability based on their own organisational measures. It has not been the purpose of this thesis to assess what and how other agencies collect and understand vulnerability and vulnerable people, although it is accepted that there is a clear relationship between the police and other agencies in supporting vulnerable people. Thus, future explorations may consider vulnerability within case histories of those individuals and families who are considered 'frequent flyers', i.e., regular customers of public services (Carroll, 2019). This may help develop a better understanding of 'tipping points' in the lives of vulnerable people and how agencies can develop early indicators and early intervention approaches.

Bartkowiak-Théron and Asquith (2016) noted that vulnerable people were over-represented in the criminal justice system but under-represented in victim support services. The data identified in this thesis suggests that victim support services (VSS) are alerted when a victim of crime requests support. However, there has been no known research exploring the link between vulnerable people and access to VSS. This would offer a unique research opportunity to exploring this current gap.

The relationship between victim and offender has often been considered within research (Schultz, 1968), for example, sexual assault (Ullman and Siegel, 1993), sex trafficking (Serie et al., 2018), cyber abuse (Vakhitova et al., 2018) and stalking (Groves et al., 2004). However, there is very limited research in the effects of the offender-victim relationship and vulnerable populations. This may be a feature within certain themes but does not appear to have been considered in relation to the growing subject of vulnerability and policing. Following on from this, the same can be said for understanding the offender as a vulnerable person. This has been researched in relation to how they are managed and supported through police custody and the court process, but not as contributory factor that may promote criminogenic tendencies. Whilst this sits more comfortably in a criminology arena, there remains a dearth of research that examines the offender as a vulnerable person. Within victimology studies research is mostly centred on the victim of crime despite recognising that offenders are often victims of crime too.

Chapter 11: Conclusion

Is vulnerability still 'vogue' in policing? Put simply: yes. Vulnerability is ubiquitous in policing. It has been an aspect of police work since policing began in 1829, but its direct operationalisation in policing practice has arguably only occurred over the last decade. This thesis is a timely reminder that the concept of vulnerability is a necessary concept in policing. Not just for the police to develop their service in supporting vulnerable people but also how they self-reflect on their own actions. Since the start of this thesis through to its conclusion a lot has happened across the landscape of policing vulnerability in both research and practice. There have been many significant and promising advancements in policing vulnerability: the Violence Against Women and Girls (VAWG) framework, the Vulnerability Knowledge and Practice Programme (VKPP), the Vulnerability and Policing Futures Research Centre and the Violence Reduction Units. The thesis is timely and adds to the growing evidence base by offering a unique contribution to knowledge. The policing of vulnerability is an enduring and essential concept: It must remain at the heart of policing. As such, this thesis aimed to investigate how the police define, identify, and respond to vulnerability.

The research was divided into three parts, and these can be addressed as follows:

1. First, how are front line police guided towards a consensual definition of vulnerability, without which consistency of police actions is unlikely? It was found that vulnerability was 'officially' defined in numerous and ambiguous ways that are confusing for police practitioners. The College of Policing (2020, p. 9) has since offered a definition that states a "person is vulnerable if, as a result of their situation or circumstances, they are unable to take care of or protect themselves or others from harm or exploitation." Based on the researcher's engagement with front line practitioners it is doubtful that this definition would advance consistency of application of the label of vulnerability. But perhaps it doesn't need to: simply acknowledging that dealing with vulnerability is an essential element of policing maintains the operational focus needed to develop appropriate policing responses.

2. Secondly, how do the police, in the absence of clear direction, identify vulnerability? In essence they do not *identify* it but rather *record* it. Police recorded data does not assess vulnerability in a clinical or measured way. The three data sets used in this thesis were found to be inconsistent in how they record vulnerability. Findings suggest that who is recorded as vulnerable might be skewed by crime classifications.

3. Finally, how do the police respond to vulnerability? Mostly through the use of PVP referrals and multi-agency safeguarding teams. It should be noted that the police are not clinically trained to assess individuals for complex needs (i.e., vulnerability) and the PVP referrals are a route to assessing 'need' through a more appropriate agency. Further to this, this thesis argues that vulnerability per se, should be considered as a predictor towards future harm. Those recorded as vulnerable are vulnerable to harm. Therefore, police forces should be ensuring that any vulnerable qualifier or identification should result in future actions to improve a person's outcomes.

Attempting to capture all manner of vulnerabilities is confusing the landscape for frontline practitioners. Therefore, the ecological approach to vulnerability, developed through this research, can be used to improve practitioner understanding and influence a positive police response to improving outcomes for those who are vulnerable to harm. The most logical and impactful place to commence is by supporting victims. Arguably, the findings in this thesis complement existing literature, whilst covering gaps in research and contributing an evidence base to inform police policy and practice on a national scale. It is also hoped that this thesis will influence policing so that it reduces the harm suffered by those considered vulnerable, regardless of the definition.

Reference List

Adderley, R.W. and Musgrove, P. (2001), "Police crime recording and investigation systems – A user's view", *Policing: An International Journal*, Vol. 24 No. 1, pp. 100-114.

Addle, G. and Liddle, J., 2021. Transforming Police Education and Professional Development in Response to the Vulnerability Agenda and Covid-19. Available at: <https://bscpolicingnetwork.com/2021/06/21/transforming-police-education-and-professional-development-in-response-to-the-vulnerability-agenda-and-covid-19/> [accessed 22 June 2021].

Agresti, A., 2002. *Categorical Data Analysis*, 2nd edition. New York, USA: Wiley.

Aihio, N., Frings, D., Wilcock, R. and Burrell, P., 2017. Crime victims' demographics inconsistently relate to self-reported vulnerability. *Psychiatry, Psychology and Law*, 24(3), pp. 379-391.

Akers, T.A. and Lanier, M.M., 2009. "Epidemiological criminology": Coming full circle. *American Journal of Public Health*, 99(3), pp. 397-402.

Akins, S., Burkhardt, B.C. and Lanfear, C., 2016. Law enforcement response to "frequent fliers" an examination of high-frequency contacts between police and justice-involved persons with mental illness. *Criminal Justice Policy Review*, 27(1), pp. 97-114.

Albrecht, J.F., 2021. Afterword and Final Thoughts: Improving Police Service Delivery. Albrecht, J.F. and den Heyer, G., eds., *Enhancing Police Service Delivery*. Cham, Switzerland: Springer, pp. 431-440.

Albrecht, T.L., Johnson, G.M. and Walther, J.B., 1993. Understanding communication processes in focus groups. Morgan, D., ed., *Successful Focus Groups: Advancing the State of the Art*. Newbury Park, California: Sage.

Ali, S. and Kelly, M., 2012. Ethics and social research. Seale, C., ed., *Researching Society and Culture*, 3rd edition. London: Sage.

Alison, L.J., Snook, B. and Stein, K.L., 2001. Unobtrusive measurement: Using police information for forensic research. *Qualitative Research*, 1(2), pp. 241-254.

Aliverti, A., 2020. Benevolent policing? Vulnerability and the moral pains of border controls. *The British Journal of Criminology*, 60(5), pp. 1117-1135.

Anda, R.F., Felitti, V.J., Bremner, J.D., Walker, J.D., Whitfield, C.H., Perry, B.D., Dube, S.R. and Giles, W.H., 2006. The enduring effects of abuse and related adverse experiences in childhood. *European Archives of Psychiatry and Clinical Neuroscience*, 256(3), pp.174-186.

Andersen, H.A. and Mueller-Johnson, K., 2018. The Danish Crime Harm Index: how it works and why it matters. *Cambridge Journal of Evidence-Based Policing*, 2(1), pp. 52-69.

Anderson, E. and Burris, S., 2017. Policing and public health: Not quite the right analogy. *Policing and Society*, 27(3), pp. 300-313.

Andresen, M.A. and Malleson, N., 2015. Intra-week spatial-temporal patterns of crime. *Crime Science*, 4(1), pp.1-11. Open access, available at <https://crimesciencejournal.biomedcentral.com/articles/10.1186/s40163-015-0024-7> [accessed 5 May 2021].

Andresen, M.A. and Malleson, N., 2013. Crime seasonality and its variations across space. *Applied Geography*, 43, pp. 25-35.

Andrews, R. and Boyne, G.A., 2009. Size, structure and administrative overheads: An empirical analysis of English local authorities. *Urban studies*, 46(4), pp. 739-759.

Andrews, T., 2022. Co-operation or unification: Is the future of police multi-agency working simply to become one agency?. *The Police Journal*, p.0032258X221094494.

Anthias, F., 2013. Intersectional what? Social divisions, intersectionality and levels of analysis. *Ethnicities*, 13(1), pp. 3-19.

Anthias, F., 1998. Rethinking social divisions: some notes towards a theoretical framework. *The Sociological Review*, 46(3), pp. 505-535.

Aplin, R., 2021. Police discretion, pragmatism and crime 'deconstruction': Police doorstep crime investigations in England and Wales. *Policing and Society*, pp. 1-21.

Appleton, J.V., 1999. Assessing vulnerability in families. *Research Issues in Community Nursing*, pp. 126-164.

Appleton, J.V., 1996. Working with vulnerable families: a health visiting perspective. *Journal of Advanced Nursing*, 23(5), pp. 912-918.

Appleton, J.V., 1994. The concept of vulnerability in relation to child protection: health visitors' perceptions. *Journal of Advanced Nursing*, 20(6), pp. 1132-1140.

Ariel, B. and Bland, M., 2019. Is crime rising or falling? A comparison of police-recorded crime and victimization surveys. Deflem, M. and Silva, D.M. eds., *Methods of Criminology and Criminal Justice Research*. Bingley: Emerald Publishing Limited.

Arora, S.K., Shah, D., Chaturvedi, S. and Gupta, P., 2015. Defining and measuring vulnerability in young people. *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine*, 40(3), pp. 193-197.

Ashby, M.P., 2018. Comparing methods for measuring crime harm/severity. *Policing: A Journal of Policy and Practice*, 12(4), pp. 439-454.

Asquith, N.L. and Bartkowiak-Théron, I., 2021. *Policing Practices and Vulnerable People*. Cham, Switzerland: Palgrave Macmillan.

Asquith, N.L. and Bartkowiak-Théron, I., 2017. The police as public health interventionists. Asquith, N.L., Bartkowiak-Théron, I. and Roberts, K.A. eds., *Policing Encounters with Vulnerability*. Cham, Switzerland: Palgrave Macmillan.

Asquith, N.L. and Bartkowiak-Théron, I., 2016. Policing precariousness: Ontological and situational vulnerability in policing encounters. *Theoretical Criminology*. (Personal communication with researcher).

Asquith, N.L., Bartkowiak-Théron, I. and Roberts, K., eds., 2017. *Policing Encounters with Vulnerability*. Cham, Switzerland: Springer.

Asquith, N.L., Bartkowiak-Théron, I., and Roberts, K., 2016. Vulnerability and the Criminal Justice System (Guest Editorial). *Journal of Criminological Research, Policy and Practice*, 2(3), pp. 161–163.

Atkinson, M., Doherty, P. and Kinder, K., 2005. Multi-agency working: models, challenges and key factors for success. *Journal of Early Childhood Research*, 3(1), pp. 7-17.

Atkinson, M., Jones, M. and Lamont, E., 2007. *Multi-agency Working and its Implications for Practice*. Reading: CfBT Education Trust.

Bangs, M., 2016. Research outputs: developing a Crime Severity Score for England and Wales using data on crimes recorded by the police. Available at <https://backup.ons.gov.uk/wp-content/uploads/sites/3/2016/11/Research-outputs-developing-a-Crime-Severity-Score-for-England-and-Wales-using-data-on-crimes-recorded-by-the-.pdf> [accessed 28 March 2019].

Barlow, C., Johnson, K., Walklate, S. and Humphreys, L., 2020. Putting coercive control into practice: Problems and possibilities. *The British Journal of Criminology*, 60(1), pp. 160-179.

Bartkowiak-Théron, I. and Asquith, N.L., 2017. Conceptual divides and practice synergies in law enforcement and public health: Some lessons from policing vulnerability in Australia. *Policing and Society*, 27(3), pp. 276-288.

Bartkowiak-Théron, I. and Asquith, N.L., 2015. Policing diversity and vulnerability in the post-Macpherson era: Unintended consequences and missed opportunities. *Policing: A Journal of Policy and Practice*, 9(1), pp. 89-100.

Bartkowiak-Théron, I. and Asquith, N.L., 2012a. *Policing Vulnerability*. Sydney: Federation Press.

Bartkowiak-Théron, I. and Asquith, N.L., 2012b. The extraordinary intricacies of policing vulnerability. *Australasian Policing: A Journal of Professional Practice and Research*, 4(2), pp. 43-49.

Bartkowiak-Théron, I. and Corbo Crehan, A., 2012. "For when equality is given to unequals, the result is inequality": The socio-legal ethics of vulnerable people. Bartkowiak-Théron, I. and Asquith, N.L., eds., *Policing Vulnerability*. Sydney, Australia: Federation Press, pp. 33-46.

Bartkowiak-Théron, I. and Corbo Crehan, A., 2011. A New Movement in Community Policing? From Community Policing to Vulnerable People Policing. Putt, J., ed., *Community Policing in Australia*. Research and Public Policy Series 111. Australian Institute of Criminology, pp. 16–23.

Bartkowiak-Théron, I. and Layton, C., 2012. Educating for vulnerability. Bartkowiak-Théron, I. and Asquith, N.L., eds., *Policing Vulnerability*. Sydney: Federation Press.

Bartkowiak-Théron, I., Asquith, N.L. and Roberts, K.A., 2017. Vulnerability as a contemporary challenge for policing. Bartkowiak-Théron, I., Asquith, N.L. and Roberts, K.A., eds., *Policing Encounters with Vulnerability*. Cham, Switzerland: Palgrave Macmillan, pp. 1-24.

Barton, H. and Valero-Silva, N., 2013. Policing in partnership: a case study in crime prevention. *International Journal of Public Sector Management*, 26(7), pp. 543-553.

Bate, A. and Bellis, A. 2018. The troubled families programme: briefing paper Number CBP 07585. Available at <https://dera.ioe.ac.uk/32005/1/CBP-7585%20.pdf> [accessed 6th June 2021].

Bateson, K., McManus, M. and Johnson, G., 2020. Understanding the use, and misuse, of Adverse Childhood Experiences (ACEs) in trauma-informed policing. *The Police Journal*, 93(2), pp. 131-145.

Batts, A.W., Smoot, S.M. and Scrivner, E.M., 2012. *Police Leadership Challenges in a Changing World*. US Department of Justice, Office of Justice Programs, National Institute of Justice.

Baumer, E. and Wright, R., 1996. Crime seasonality and serious scholarship: A comment on Farrell and Pease. *British Journal of Criminology*, 36, pp. 579-581.

Beckett, H. and Warrington, C., 2014. *Suffering in silence: children and unreported crime*. Victim Support and University of Bedfordshire.

Bekhet, A.K. and Zauszniewski, J.A., 2012. Methodological triangulation: An approach to understanding data. *Nurse Researcher*, 20(2), pp. 1-11. Available at https://epublications.marquette.edu/cgi/viewcontent.cgi?article=1395&context=nursing_fac [accessed 28 March 2022].

Bellis, M.A., Lowey, H., Leckenby, N., Hughes, K. and Harrison, D., 2014. Adverse childhood experiences: retrospective study to determine their impact on adult health behaviours and health outcomes in a UK population. *Journal of Public Health*, 36(1), pp. 81-91.

Belur, J., Agnew-Pauley, W., McGinley, B. and Tompson, L., 2020. A systematic review of police recruit training programmes. *Policing: A Journal of Policy and Practice*, 14(1), pp. 76-90.

Betts, B. and Farmer, C., 2019. Home Office Police Front Line Review: Workshops with Police Officers and Police Staff—Summary Report. Available at http://data.parliament.uk/DepositedPapers/Files/DEP2019-0741/ONS_FLR_Summary_chapter.pdf [accessed on 17 January 2024].

Bichard, S.M., 2004. *The Bichard Inquiry Report*. London: The Stationery Office (TSO).

Biderman, A.D. and Reiss, A.J., 2017. On exploring the “dark figure” of crime. Bushway, S. and Weisburd, D., eds., *Quantitative Methods in Criminology*. Abingdon: Routledge, pp. 201-215.

Binns, C. and Low, W.Y., 2017. Nobel prizes, nudge theory, and public health. *Asia Pacific Journal of Public Health*, 29(8), pp. 632-634.

Bittner, E., 1991. The functions of police in modern society. Klockars, C.B. and Mastrofski, S.D., *Thinking About Police: Contemporary Readings*. New York: McGraw-Hill.

Bittner, E., 1974. 'Florence Nightingale in Pursuit of Willie Sutton: A Theory of the Police', in Herbert Jacobs, ed., *The Potential for Reform of Criminal Justice*, Vol. 3. Beverly Hills, CA: Sage, now in Egon Bittner

Bland, M.P. and Ariel, B., 2020. *Targeting Domestic Abuse with Police Data*. Cham, Switzerland: Springer International Publishing.

Blanes i Vidal, J., Bolte, L. and Kirchmaier, T., 2017. Domestic Abuse: What Do We Know About It?. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2867580 [accessed 2 June 2021].

Bloch, A., 2012. Statistical reasoning: from one to two variables. Seale, C., ed., *Researching Society and Culture*, 3rd edition. London: Sage.

Boivin, R., 2018. Routine activity, population (s) and crime: Spatial heterogeneity and conflicting Propositions about the neighborhood crime-population link. *Applied Geography*, 95, pp. 79-87.

Boldt, J., 2019. The concept of vulnerability in medical ethics and philosophy. *Philosophy, Ethics, and Humanities in Medicine*, 14(1), pp. 1-8.

Bonfine, N., Ritter, C. and Munetz, M.R., 2014. Police officer perceptions of the impact of crisis intervention team (CIT) programs. *International Journal of Law and Psychiatry*, 37(4), pp. 341-350.

Boullier, M. and Blair, M., 2018. Adverse childhood experiences. *Paediatrics and Child Health*, 28(3), pp. 132-137.

Boulton, L., McManus, M., Metcalfe, L., Brian, D. and Dawson, I., 2017. Calls for police service: Understanding the demand profile and the UK police response. *Police Journal: Theory, Practice and Principles*, 90(1), pp. 70-85.

Boyd, J. and Kerr, T., 2016. Policing 'Vancouver's mental health crisis': a critical discourse analysis. *Critical Public Health*, 26(4), pp. 418-433.

Bracken-Roche, D., Bell, E., Macdonald, M.E. and Racine, E., 2017. The concept of 'vulnerability' in research ethics: an in-depth analysis of policies and guidelines. *Health Research Policy and Systems*, 15(8), pp. 1-18.

Bradshaw, J., 1972. Taxonomy of social need. McLachlan, G., ed., *Problems and Progress in Medical Care: Essays on Current Research*, 7th series. Oxford: Oxford University Press, pp. 71-82. Available at <https://eprints.whiterose.ac.uk/118357/1/> [accessed 24 April 2021].

Braga, A.A., Turchan, B.S., Papachristos, A.V. and Hureau, D.M., 2019. Hot spots policing and crime reduction: an update of an ongoing systematic review and meta-analysis. *Journal of Experimental Criminology*, 15(3), pp. 289-311.

Brain, T., 2014. Police and crime commissioners: the first twelve months. *Safer Communities*, 13(1), pp. 40-50.

Brandon, M., Howe, A., Dagley, V., Salter, C. and Warren, C., 2006. What appears to be helping or hindering practitioners in implementing the Common Assessment Framework and Lead Professional working?. *Child Abuse Review: Journal of the British Association for the Study and Prevention of Child Abuse and Neglect*, 15(6), pp. 396-413.

Brantingham, P.J. and Brantingham, P.L., 2016. The geometry of crime and crime pattern theory. Wortley, R. and Townsley, M., eds., *Environmental Criminology and Crime Analysis*, 2nd edition. Abingdon: Routledge, pp. 117-135.

Brantingham, P.J. and Brantingham P.L., 2008. Crime pattern theory. Wortley, R. and Mazzerole, L., eds., *Environmental Criminology and Crime Analysis*. Cullompton: Willan Publishing.

Brantingham, P.J. and Brantingham, P.L., 1995. Criminality of place. *European Journal on Criminal Policy and Research*, 3(3), pp. 5-26.

Brantingham, P.J. and Brantingham, P.L., 1984. *Patterns in Crime*. New York: Macmillan.

Brantingham, P.J. and Brantingham, P.L. eds., 1981. *Environmental Criminology*. Beverly Hills, CA: Sage Publications, pp. 27-54.

Brantingham, P.L. and Brantingham, P.J., 1993. Environment, routine and situation: Toward a pattern theory of crime. *Advances in Criminological Theory*, 5(2), pp. 259-294.

Brantingham, P.J., Mohler, G. and MacDonald, J., 2022. Changes in public–police cooperation following the murder of George Floyd. *PNAS nexus*, 1(5), pp 1-11.

Brennan, I., 2016. Official crime statistics and victim surveys. Corteen, K., Morley, S., Taylor, P. and Turner, J., eds., *A Companion to Crime, Harm and Victimisation*. Bristol: Policy Press.

Bricknell, S., 2016. Gender and victimisation. Corteen, K., Morley, S., Taylor, P and Turner, J., eds., *A Companion to Crime, Harm and Victimisation*. Bristol: Policy Press.

Brimblecombe, N., Pickard, L., King, D. and Knapp, M., 2018. Barriers to receipt of social care services for working carers and the people they care for in times of austerity. *Journal of Social Policy*, 47(2), pp. 215-233.

Brimicombe, A., 2018. Mining police-recorded offence and incident data to inform a definition of repeat domestic abuse victimization for statistical reporting. *Policing: A Journal of Policy and Practice*, 12(2), pp. 150-164.

Brimicombe, A., 2016. Analysing Police-Recorded Data. *Legal Information Management*, 16(2), pp. 71-77.

Brimicombe, A., Brimicombe, L.C. and Li, Y., 2007. Improving geocoding rates in preparation for crime data analysis. *International Journal of Police Science & Management*, 9(1), pp. 80-92.

Brodeur, J.P., 2010. *The Policing Web*. Oxford: Oxford University Press.

Bronfenbrenner, U., 1986. *Ecology of the family as a context for human development: Research perspectives*. *Developmental psychology*, 22(6), pp. 723-742.

Bronfenbrenner, U., 1979. *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA, USA: Harvard University Press.

Bronfenbrenner, U., 1977. Toward an experimental ecology of human development. *American Psychologist*, 32(7), pp. 513-531.

Brown, C.E., 2013. *The Concept of Vulnerability and its Use in the Care and Control of Young People*. PhD Thesis. The University of Leeds, School of Sociology and Social Policy.

Brown, K., 2017. *Vulnerability and Young People: Care and Social Control in Policy and Practice*. Bristol: Policy Press.

Brown, K., 2012. Re-moralising 'vulnerability'. *People, Place & Policy Online*, 6(1), pp. 41-53.

Brown, K., 2011. 'Vulnerability': Handle with care. *Ethics and social welfare*, 5(3), pp. 313-321.

Brown, K., Ecclestone, K. and Emmel, N., 2017. *The Many Faces of Vulnerability*. *Social Policy and Society*, 16(3), pp. 497-510.

Brown, K. and Gordon, F., 2022. Improving access to justice for older victims of crime by reimagining conceptions of vulnerability. *Ageing & Society*, 42(3), pp. 614-631.

Bruning, P.F., Alge, B.J. and Lin, H.C., 2020. Social networks and social media: Understanding and managing influence vulnerability in a connected society. *Business Horizons*, 63(6), pp. 749-761.

Bryant, R. and Bryant, S., eds., 2020. Chapter 3: Crime and criminality. *Blackstone's Handbook for Policing Students*. Oxford: Oxford University Press, pp. 40-48.

Bryant, R., Roach, J. and Williams, E., n.d. Crime and Intelligence Analysis through Partnership (CIAP) Final Report prepared for the College of Policing. Available at <https://www.canterbury.ac.uk/science-engineering-and-social-sciences/law-policing-and-social-sciences/canterbury-centre-for-police-research/docs/Final-report-for-CoP-analysts-.Bryant-Roach-Williams.docx.pdf> [accessed 17 January 2022].

Bryman, A., 2012. *Social Research Methods*, 5th edition. Oxford, Oxford University Press.

Buckle, P., Mars, G. and Smale, S., 2000. New approaches to assessing vulnerability and resilience. *Australian Journal of Emergency Management*, 15(2), pp. 8-14.

Buil-Gil, D., Medina, J. and Shlomo, N., 2021. Measuring the dark figure of crime in geographic areas: Small area estimation from the crime survey for England and Wales. *The British Journal of criminology*, 61(2), pp. 364-388.

Bullock, K. and Tilley, N., 2009. Evidence-based policing and crime reduction. *Policing: A Journal of Policy and Practice*, 3(4), pp. 381-387.

Bundred, S., 2006. Solutions to silos: Joining up knowledge. *Public Money and Management*, 26(2), pp. 125-130.

Burcher, M. and Whelan, C., 2018. Social network analysis as a tool for criminal intelligence: Understanding its potential from the perspectives of intelligence analysts. *Trends in Organized Crime*, 21(3), pp. 278-294.

Burcher, M., 2020. *Social Network Analysis and Law Enforcement: Applications for Intelligence Analysis*. Cham, Switzerland: Palgrave.

Burke, L., 2015. Sexual offending: Past injustice and present risks. *Probation Journal*, 62(4), pp. 315-319.

Burns, M.K., Warmbold-Brann, K. and Zaslofsky, A.F., 2015. Ecological systems theory in school psychology review. *School Psychology Review*, 44(3), pp. 249-261.

- Burton, M., Evans, R. and Sanders, A., 2006. *Are Special Measures for Vulnerable and Intimidated Witnesses Working?: Evidence from the Criminal Justice Agencies*. London: Home Office. Available from: <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.624.6353&rep=rep1&type=pdf> [Accessed 3 April 2017].
- Byrne, R. and Smith, K., 2016. Modern slavery and agriculture. Donnermeyer, J.F., ed., *The Routledge International Handbook of Rural Criminology*. London: Routledge, pp. 157-165.
- Callanan, M., Turley, C., Brown, A and Kenny, T., n.d., Measuring outcomes for victims of crime. A Ministry of Justice Report. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/217386/measuring-outcomes-for-victims-of-crime.pdf [accessed].
- Campeau, H., 2019. Institutional myths and generational boundaries: cultural inertia in the police organisation. *Policing and Society*, 29(1), pp. 69-84.
- Caneppele, S. and Aebi, M.F., 2019. Crime drop or police recording flop? On the relationship between the decrease of offline crime and the increase of online and hybrid crimes. *Policing: A Journal of Policy and Practice*, 13(1), pp. 66-79.
- Cape, E. and Young, R. eds., 2008. *Regulating policing: the Police and Criminal Evidence Act 1984 past, present and future*. Oxford: Bloomsbury Publishing.
- Carroll, S.M., 2019. Respecting and empowering vulnerable populations: contemporary terminology. *The Journal for Nurse Practitioners*, 15(3), pp. 228-231.
- Casey, L. 2023. *Baroness Casey's Report on Misconduct*. Available at <https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/baroness-casey-review/update-march-2023/baroness-casey-review-march-2023a.pdf> [accessed 10 June 2023].
- Chainey, S. and Ratcliffe, J., 2005. *GIS and Crime Mapping*. Chichester: John Wiley and Sons.

Chakraborti, N. and Garland, J., 2012. Reconceptualizing hate crime victimization through the lens of vulnerability and 'difference'. *Theoretical Criminology*, 16(4), pp. 499-514.

Chamberlain, J., 2013. *Understanding Criminological Research*. London: Sage.

Chapman, D.P., Whitfield, C.L., Felitti, V.J., Dube, S.R., Edwards, V.J. and Anda, R.F., 2004. Adverse childhood experiences and the risk of depressive disorders in adulthood. *Journal of Affective Disorders*, 82(2), pp. 217-225.

Charmaz, K., 2014. *Constructing Grounded Theory*. London: Sage.

Checkland, K., Allen, P., Coleman, A., Segar, J., McDermott, I., Harrison, S., Petsoulas, C. and Peckham, S., 2013. Accountable to whom, for what? An exploration of the early development of Clinical Commissioning Groups in the English NHS. *BMJ open*, 3(12), (p.e003769), pp. 1-11. Available at <https://bmjopen.bmj.com/content/bmjopen/3/12/e003769.full.pdf> [accessed 10 June 2021].

Chisholm, M., 2004. Reorganizing two-tier local government for regional assemblies. *Public Money & Management*, 24(2), pp. 113-120.

Chitsabesan, P., Kroll, L., Bailey, S.U.E., Kenning, C., Sneider, S., MacDonald, W. and Theodosiou, L., 2006. Mental health needs of young offenders in custody and in the community. *The British Journal of Psychiatry*, 188(6), pp. 534-540.

Christie, N., 1986. The Ideal Victim. Duggan, M. ed., 2018. *Revisiting the 'Ideal Victim': Developments in Critical Victimology*. Bristol: Policy Press.

Christmas, H. and Srivastava, J., 2019. Public health approaches in policing: A discussion paper. College of Policing and Public Health England. Available at https://cleph.com.au/application/files/7615/5917/9047/Public_Health_Approaches_in_Policing_2019_England.pdf [accessed 5 May 2020].

Clarke, R. and Eck, J., 2003. *Become a problem-solving crime analyst*. London: JDI Crime Science, UCL. Available at

<https://popcenter.asu.edu/sites/default/files/library/reading/PDFs/55stepsUK.pdf>
[accessed 27 August 2019].

Clarke, R.V., 2013. Situational crime prevention. Wortley, R. and Mazerolle, L., eds., *Environmental Criminology and Crime Analysis*. Cullompton: Willan, pp. 200-216.

Clarke, R.V., 1995. Situational crime prevention. *Crime and Justice*, 19, pp. 91-150.

Clarke, R.V., 1983. Situational crime prevention: Its theoretical basis and practical scope. *Crime and Justice*, 4, pp. 225-256.

Clarke, R.V., Ekblom, P., Hough, M. and Mayhew, P., 1985. Elderly victims of crime and exposure to risk. *The Howard Journal of Criminal Justice*, 24(1), pp. 1-9.

Clarke, R.V. and Felson, M., 1993. *Routine Activity and Rational Choice: Advances in Criminological Theory*, Vol 5. New Brunswick, NJ, USA: Transaction.

Cohen, L.E. and Felson, M., 1979. Social change and crime rate trends: A routine activity approach. *American Sociological Review*, pp. 588-608.

Cohn, E.G. and Rotton, J., 2003. Even criminals take a holiday: Instrumental and expressive crimes on major and minor holidays. *Journal of Criminal Justice*, 31(4), pp. 351-360.

Cole, A., 2016. All of us are vulnerable, but some are more vulnerable than others: The political ambiguity of vulnerability studies, an ambivalent critique. *Critical Horizons*, 17(2), pp. 260-277.

Coliandris, G., 2015. County lines and wicked problems: Exploring the need for improved policing approaches to vulnerability and early intervention. *Australasian Policing*, 7(2), pp. 25-35.

College of Policing, 2021a. Victims' Code for Policing. Available at <https://www.college.police.uk/guidance/victims-code/victims-rights-policing>
[accessed 20 August 2021].

College of Policing, 2021b. Our approach to public health. Available at <https://www.college.police.uk/about/public-health> [accessed 10 June 2021].

College of Policing, 2021c. About Us. Available at: <https://www.college.police.uk/About/Pages/default.aspx> [accessed 10 September 2021].

College of Policing, 2021d. Policing violence against women and girls - National framework for delivery: Year 1. Available at <https://www.npcc.police.uk/SysSiteAssets/media/downloads/our-work/vawg/policing-vawg-national-framework-for-delivery-year-1.pdf> [accessed 10 June 2023].

College of Policing, 2020a. Intelligence Management: analytical techniques. Available at <https://www.app.college.police.uk/app-content/intelligence-management/analysis/analytical-techniques/> [accessed 17 January 2022].

College of Policing, 2020b. Recognising and responding to vulnerability related risks guidelines (Consultation paper). Available at <https://paas-s3-broker-prod-lon-6453d964-1d1a-432a-9260-5e0ba7d2fc51.s3.eu-west-2.amazonaws.com/s3fs-public/Recognising-responding-vulnerability-related-risks-guidelines.pdf> [accessed 1 June 2021].

College of Policing, 2019a. Definition of vulnerability. Available at <https://www.college.police.uk/What-we-do/Development/Vulnerability/Pages/Vulnerability.aspx> [accessed 4 October 2019].

College of Policing, 2019b. Mental vulnerability and illness. Available at <https://www.app.college.police.uk/app-content/mental-health/mental-vulnerability-and-illness/> [accessed 27 August 2020].

College of Policing, 2018. Vulnerability: a review of reviews. Summary of findings from reviews identified from a systematic research map. Available at: https://whatworks.college.police.uk/Research/Documents/Vulnerability_review_of_reviews.pdf [accessed 28 September 2020].

College of Policing, 2016. Mental health. Available at <https://www.app.college.police.uk/app-content/mental-health/?s=> [accessed 27 August 2020].

College of Policing, 2015. College of Policing Analysis: Estimating Demand on the Police Service. Available at: <https://paas-s3-broker-prod-lon-6453d964-1d1a-432a-9260-5e0ba7d2fc51.s3.eu-west-2.amazonaws.com/s3fs-public/2021-03/demand-on-policing-report.pdf> [accessed 21 October 2021].

Collins, M., 2010. Thresholds in adult protection. *The Journal of Adult Protection*, 12(1), pp. 4-12.

Compton, M.T., Broussard, B., Hankerson-Dyson, D., Krishan, S., Stewart, T., Oliva, J.R. and Watson, A.C., 2010. System-and policy-level challenges to full implementation of the Crisis Intervention Team (CIT) model. *Journal of Police Crisis Negotiations*, 10(1-2), pp. 72-85.

Connelly, R., Playford, C., Gayle, V., and Dibben, C., 2016. The role of administrative data in the big data revolution in social science research. *Social Science Research*, 59. Available at <https://www.sciencedirect.com/science/article/pii/S0049089X1630206X#bib89> [accessed 16 July 2019].

Cooper, A. and Bruin, C., 2017. Adult safeguarding and the Care Act (2014)—the impacts on partnerships and practice. *The Journal of Adult Protection*, 19(4), pp. 209-219.

Cooper, F.R., 2015. Always Already Suspect: Revising Vulnerability Theory. *North Carolina Law Review*, 93(3), pp. 1339-1380.

Cooper, P., Dando, C., Ormerod, T., Mattison, M., Marchant, R., Milne, R. and Bull, R., 2018. One step forward and two steps back? The '20 Principles' for questioning vulnerable witnesses and the lack of an evidence-based approach. *The International Journal of Evidence & Proof*, 22(4), pp. 392-410.

Cooper, S.J., 2018. Holding the police to account: A critical analysis of the structures of police accountability and the introduction and operation of Police and Crime Commissioners (Doctoral dissertation). Available at: <http://repository.essex.ac.uk/21269/> [accessed 28 July 2020].

Cops, D. and Pleysier, S., 2011. 'Doing gender' in fear of crime: The impact of gender identity on reported levels of fear of crime in adolescents and young adults. *The British Journal of Criminology*, 51(1), pp. 58-74.

Cox, K., Strang, L., Sondergaard, S. and Monsalve, C.G., 2017. *Understanding How Organisations Ensure That Their Decision Making is Fair*. Santa Monica, CA, USA: RAND.

CPS, 2021. Eligibility for Special Measures: Vulnerable. Available at: <https://www.cps.gov.uk/legal-guidance/special-measures> [accessed 1 September 2021].

Cram, F., 2018. The 'carrot' and 'stick' of integrated offender management: implications for police culture. *Policing and society*, 30(4), pp. 378-395.

Crawford, A. and Cunningham, M., 2015. Working in partnership: The Challenges of Working across Organizational Boundaries, Cultures, and Practices. Fleming, J., ed., *Police Leadership: Rising to the Top*. Oxford: Oxford University Press, pp.71-94

Crawford, A and L'Hoiry, X., 2015. Partnerships in the Delivery of Policing and Safeguarding Children: Summary. Available at https://eprints.whiterose.ac.uk/94378/1/Partnership1---KEOS-Final_web.pdf [accessed 28 March 2021].

Crenshaw, K.W., 2017. *On Intersectionality: Essential Writings*. New York: The New Press.

Cresswell, J., 2014. *Research Design*, 4th edition. Thousand Oaks, California: Sage.

Crockett, R., Gilchrist, G., Davies, J., Henshall, A., Hoggart, L., Chandler, V., Simms, D. and Webb, J., 2013. Assessing the early impact of Multi Agency Safeguarding

Hubs (MASH) in London. Available at: <http://www.londonscb.gov.uk/wp-content/uploads/2016/04/> [accessed 30 March 2021].

Cromdal, J., Osvaldsson, K. and Persson-Thunqvist, D., 2008. Context that matters: Producing “thick-enough descriptions” in initial emergency reports. *Journal of Pragmatics*, 40(5), pp. 927-959.

Crossley, S., 2018. *Troublemakers: The Construction of ‘Troubled Families’ as a Social Problem*. Bristol: Policy Press.

Cunha, T. and Garrafa, V., 2016. Vulnerability: a key principle for global bioethics?. *Cambridge Quarterly of Healthcare Ethics*, 25(2), pp. 197-208.

Curtis-Ham, S. and Walton, D., 2018. The New Zealand crime harm index: Quantifying harm using sentencing data. *Policing: A Journal of Policy and Practice*, 12(4), pp. 455-467.

Cutter, S.L., Boruff, B.J. and Shirley, W.L., 2006. Social vulnerability to environmental hazards. Cutter, S.L. ed., *Hazards, Vulnerability and Environmental Justice*. Abingdon: Earthscan, pp. 115-132.

Cyr, J., 2019. *Focus Groups for the Social Science Researcher*. Cambridge University Press.

Darling, N., 2007. Ecological systems theory: The person in the center of the circles. *Research in Human Development*, 4(3-4), pp. 203-217.

Darlington, Y., Feeney, J.A. and Rixon, K., 2004. Complexity, conflict and uncertainty: Issues in collaboration between child protection and mental health services. *Children and Youth Services Review*, 26(12), pp. 1175-1192.

Davies, P., 2011. *Gender, Crime and Victimisation*. London: Sage.

Davies, P., 2007. Lessons from the gender agenda. Walklate, S., ed., *Handbook of Victims and Victimology*. Cullompton: Willan, pp. 191-218.

Davis, C. and Bailey, D., 2017. Police leadership: the challenges for developing contemporary practice. *International Journal of Emergency Services*, 7(1), pp. 13-23.

Day, A.S., Jenner, A. and Weir, R., 2018. Domestic abuse: predicting, assessing and responding to risk in the Criminal Justice System and beyond. Milne, E., Brennan, K., South, N. and Turton, J., eds., *Women and the Criminal Justice System*. Cham, Switzerland: Palgrave Macmillan, pp. 67-94.

de Maillard, J. and Savage, S.P., 2018. Policing as a performing art? The contradictory nature of contemporary police performance management. *Criminology & Criminal Justice*, 18(3), pp. 314-331.

Dean, G. and Gottschalk, P., 2007. *Knowledge Management in Policing and Law Enforcement*. Oxford: Oxford University Press.

Decker, M.R., Holliday, C.N., Hameeduddin, Z., Shah, R., Miller, J., Dantzler, J. and Goodmark, L., 2019. "You do not think of me as a human being": Race and gender inequities intersect to discourage police reporting of violence against women. *Journal of urban health*, 96, pp. 772-783.

Dehaghani, R., 2021. Interrogating vulnerability: reframing the vulnerable suspect in police custody. *Social and Legal Studies*, 30(2), pp. 251-271.

Dehaghani, R., 2019. *Vulnerability in Police Custody: Police Decision-Making and the Appropriate Adult Safeguard*. Abingdon: Routledge.

Dehaghani, R., 2017. 'Vulnerable by law (but not by nature)': examining perceptions of youth and childhood 'vulnerability' in the context of police custody. *Journal of Social Welfare and Family Law*, 39(4), pp. 454-472.

Dehaghani, R. and Newman, D., 2017. 'We're Vulnerable Too': An (Alternative) Analysis of Vulnerability within English Criminal Legal Aid and Police Custody. *Oñati Socio-Legal Series*, 7(6), pp. 1199-1228.

Department of Health, 2011. Joint Strategic Needs Assessment and joint health and well-being strategies explained. Available at: <https://assets.publishing.service.gov.uk/>

government/uploads/system/uploads/attachment_data/file/215261/dh_131733.pdf [Accessed 2 March 2020].

Devaney, J., 2019. The trouble with thresholds: Rationing as a rational choice in child and family social work. *Child & Family Social Work*, 24(4), pp. 458-466.

Dewinter, M., Vandeviver, C., Dau, P.M., Vander Beken, T. and Witlox, F., 2022. Hot spots and burning times: A spatiotemporal analysis of calls for service to establish police demand. *Applied Geography*, 143, p.102712.

Di Cesare, M., 2014. Women, marginalization, and vulnerability: Introduction. *Genus*, 70(2-3), pp. 1-6.

Dickens, G.L. and O'Shea, L.E., 2018. Protective factors in risk assessment schemes for adolescents in mental health and criminal justice populations: A systematic review and meta-analysis of their predictive efficacy. *Adolescent Research Review*, 3(1), pp. 95-112.

Dorling, D., Gordon, D., Hillyard, P., Pantazis, C., Pemberton, S. and Tombs, S., 2008. *Criminal Obsessions: Why Harm Matters More Than Crime*, 2nd edition. King's College, London: Centre for Crime and Justice Studies.

Dowdney, L., 2000. Annotation: Childhood bereavement following parental death. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, 41(7), pp. 819-830.

Downen, C., 2017. MoRiLE: Management of Risk in Law Enforcement. Available at <https://polmorile.files.wordpress.com/2017/12/morile-programme-briefing-note-december-2017.pdf> [accessed 28 March 2019].

Dowsley, F. and Hart, T.C., 2017. Crime and justice data. Deckert, A. and Sarre, R., eds., *The Palgrave Handbook of Australian and New Zealand Criminology, Crime and Justice*. Cham, Switzerland: Palgrave Macmillan, pp. 65-80.

Doyle, L., Brady, A.M. and Byrne, G., 2009. An overview of mixed methods research. *Journal of Research in Nursing*, 14(2), pp. 175-185.

Driskell, J.E. and Mullen, B., 2004. Social network analysis. Stanton, N.A., Hedge, A., Brookhuis, K., Salas, E. and Hendrick, H.W. eds., *Handbook of Human Factors and Ergonomics Methods*. CRC press, pp. 565-571.

Duggan, M., ed., 2018. *Revisiting the 'Ideal Victim': Developments in critical Victimology*. Bristol: Policy Press.

Dunne, J.F. and Finalay, F., 2016. Multi-agency safeguarding hub—a new way of working. *Archives of disease in Childhood*, 101(1), pp. A369-A370.

Durheim, E., 2014. *The Division of Labor in Society*. New York: Free Press.

Eck, J., 2019. Why problem oriented policing. Weisburd, D. and Braga, A., eds., *Police Innovation: Contrasting Perspectives*. Cambridge: Cambridge University Press, pp. 165-181.

Eck, J., 2001. Policing and crime event concentration. Meier, R.F., Kennedy, L.W. and Sacco, V.S. eds., *The process and structure of crime: Criminal events and crime analysis. Advances in Criminological Theory*, Vol 9. New Brunswick, USA: Transaction Publishers.

Eck, J., Chainey, S., Cameron, J. and Wilson, R., 2005. *Mapping crime: Understanding hotspots*. Available at: <https://discovery.ucl.ac.uk/id/eprint/11291/1/11291.pdf> [accessed 17 January 2020].

Eck, J. and Spelman, W., 1987. Who ya gonna call? The police as problem-busters. *Crime & Delinquency*, 33(1), pp. 31-52.

Eck, J. and Weisburd, D., 2015. Crime places in crime theory. *Crime and Place: Crime Prevention Studies*, 4, pp. 1-33.

Eck, J. and Weisburd, D., eds., 1995. *Crime and Place*. Monsey, NY, USA: Criminal Justice Press.

Elcock, H., Fenwick, J. and McMillan, J., 2010. The reorganization addiction in local government: unitary councils for England. *Public Money & Management*, 30(6), pp. 331-338.

Elias, P., 2014. Administrative data (introduction). Duşa, A., Nelle, D., Stock, G., and Wagner, G., Facing the Future: European Research Infrastructures for the Humanities and Social Sciences. Available at <https://edoc.bbaw.de/frontdoor/index/index/docId/2327> [accessed 16 July 2019].

Ellins, J. and Glasby, J., 2011. Together we are better? Strategic needs assessment as a tool to improve joint working in England. *Journal of Integrated Care*, 19(3), pp. 34-41.

Elliott, S. and Davis, J.M., 2020. Challenging taken-for-granted ideas in early childhood education: A critique of Bronfenbrenner's Ecological Systems Theory in the age of post-humanism. Cutter-Mackenzie-Knowles, A., Malone, K. and Hacking, E.B. *Research handbook on childhood nature: Assemblages of childhood and nature research*, pp. 1119-1154.

Elliott-Davies, M., Donnelly, J., Boag-Munroe, F. and Van Mechelen, D., 2016. 'Getting a battering': The perceived impact of demand and capacity imbalance within the Police Service of England and Wales: A qualitative review. *Police Journal: Theory, Practice and Principles*, 89(2), pp. 93–116.

Ellison, G. and Brogden, M., 2012. *Policing in an Age of Austerity: A postcolonial Perspective*. Abingdon: Routledge.

Enang, I., Murray, J., Dougall, N., Wooff, A., Heyman, I. and Aston, E., 2019. Defining and assessing vulnerability within law enforcement and public health organisations: a scoping review. *Health & Justice*, 7(1), pp. 1-13.

Ericson, R.V. and Haggerty, K.D., 2002. The policing of risk. Baker, T. and Simon, J. eds., *Embracing risk: The changing culture of insurance and responsibility*. Chicago, USA: University of Chicago Press.

Ewin, R., 2015. The vulnerable and intimidated witness: a socio-legal analysis of special measures. *Journal of Applied Psychology and Social Science*, 1(2), pp. 31-54.

Ewin, R., Bates, E.A. and Taylor, J.C., 2020. Domestic abuse orders: risk, vulnerability and training. *Journal of Criminological Research, Policy and Practice*, 6(2), pp. 151-167.

Experian, 2022. Mosaic UK. Available at <https://www.experian.co.uk/marketing-services/data/mosaic-uk/> [accessed 14th May 2021].

Experian, 2019. Mosaic. Available at <https://www.experianintact.com/content/uk/documents/productSheets/MosaicConsumerUK.pdf> [accessed 18 February 2022].

Farrell, G., 1992. Multiple victimisation: its extent and significance. *International Review of Victimology*, 2(2), pp. 85-102.

Farrell, G. and Birks, D., 2018. Did cybercrime cause the crime drop?. *Crime Science*, 7(1), pp. 1-4.

Farrell, G. and Pease, K., 2017. Preventing repeat and near repeat crime concentrations. Tilley, N. and Sidebottom, A., eds., *Handbook of Crime Prevention and Community Safety*, 2nd edition. Abingdon: Routledge.

Farrell, G. and Pease, K., 2008. Repeat victimisation. Wortley, R. and Mazerolle, L. eds., *Environmental Criminology and Crime Analysis*. Cullompton: Willan. pp. 117-135.

Farrell, G. and Pease, K., 2007. The sting in the tail of the British crime survey: multiple victimisations. *Crime Prevention Studies*, 22, pp. 33-54.

Farrell, G. and Pease, K., 1993. *Once Bitten, Twice Bitten: Repeat Victimisation and its Implications for Crime Prevention* (46). London: Home Office Police Research Group.

Farrell, G., Sousa, W.H. and Weisel, D.L., 2002. The time-window effect in the measurement of repeat victimization: A methodology for its examination, and an empirical study. *Crime Prevention Studies*, 13, pp. 15-28.

Farrell, G., Tilley, N. and Tseloni, A., 2014. Why the crime drop?. *Crime and Justice*, 43(1), pp. 421-490.

Farrell, G., Tseloni, A. and Pease, K., 2005. Repeat victimization in the ICVS and the NCVS. *Crime Prevention and Community Safety*, 7(3), pp. 7-18.

Fattah, E.A., 2010. The evolution of a young, promising discipline: Sixty years of victimology, a retrospective and prospective look. Shoham, S.G., Knepper, P. and Kett, M. eds., *International Handbook of Victimology*. London: Routledge, pp. 69-120.

Fawcett, B., 2009. Vulnerability: Questioning the certainties in social work and health. *International Social Work*, 52(4), pp. 473-484.

Felson, M. and Boba, R.L., 2010. *Crime and Everyday Life*, 4th edition. Thousand Oaks: Sage.

Felson, M. and Poulsen, E., 2003. Simple indicators of crime by time of day. *International Journal of Forecasting*, 19(4), pp. 595-601.

Ferguson, A.G., 2017. *The Rise of Big Data Policing*. New York: New York University Press.

Ferrarese, E., 2016. Vulnerability: A Concept with Which to Undo the World As It Is?, *Critical Horizons*, 17(2), pp. 149-159.

Fielding, N.G., 2012. Triangulation and mixed methods designs: Data integration with new research technologies. *Journal of Mixed Methods Research*, 6(2), pp. 124-136.

Finch, E and Fafinski, S., 2012. *Criminology Skills*. Oxford: Oxford University Press.

Finegan, M., Firth, N. and Delgadillo, J., 2020. Adverse impact of neighbourhood socioeconomic deprivation on psychological treatment outcomes: the role of area-level income and crime. *Psychotherapy Research*, 30(4), pp. 546-554.

Fineman, M.A., 2019. Vulnerability in Law and Bioethics. *Journal of Health Care for the Poor and Underserved*, 30(5), pp. 52-61.

Fineman, M.A., 2010. The vulnerable subject and the responsive state. *Emory Law Journal*, 60(2), pp. 252-275.

Fitz-Gibbon, K. and Walklate, S., 2017. The efficacy of Clare's Law in domestic violence law reform in England and Wales. *Criminology & Criminal Justice*, 17(3), pp. 284-300.

Fivush, R. and Merrill, N., 2016. An ecological systems approach to family narratives. *Memory Studies*, 9(3), pp. 305-314.

Fleming, J. and Rhodes, R., 2018. Can experience be evidence? Craft knowledge and evidence-based policing. *Policy & Politics*, 46(1), pp. 3-26.

Fletcher, A., Gardner, F., McKee, M. and Bonell, C., 2012. The British government's troubled families programme. *The BMJ* 2012, 344. Available at <https://www.bmj.com/content/344/bmj.e3403.short> [accessed 21 June 2021].

Fohring, S., 2018. Introduction to the special issue: Victim identities and hierarchies. *International Review of Victimology*, 24(2), pp. 147-149.

Ford, K., Newbury, A., Meredith, Z., Evans, J., Hughes, K., Roderick, J., Davies, A.R. and Bellis, M.A., 2020. Understanding the outcome of police safeguarding notifications to social services in South Wales. *The Police Journal*, 93(2), pp. 87-108.

Foster, J., Newburn, T. and Souhami, A., 2005. *Assessing the impact of the Stephen Lawrence inquiry*. Home Office Research Study 294.

Fouladvand, S. and Ward, T., 2019. Human trafficking, vulnerability and the state. *The Journal of Criminal Law*, 83(1), pp. 39-54.

Fox, B.H., Perez, N., Cass, E., Baglivio, M.T. and Epps, N., 2015. Trauma changes everything: Examining the relationship between adverse childhood experiences and serious, violent and chronic juvenile offenders. *Child Abuse & Neglect*, 46, pp. 163-173.

Fox, C., Mackay, S. and Hope, T., 2006. The independent review of crime statistics. *Community Safety Journal*, 5(4), pp. 4-12.

Frederick, T., O'Connor, C. and Koziarski, J., 2018. Police interactions with people perceived to have a mental health problem: A critical review of frames, terminology, and definitions. *Victims & Offenders*, 13(8), pp. 1037-1054.

Friedman, B., 2020. *Disaggregating the Police Function*. NYU School of Law, Public Law Research paper 20(3), pp. 925-997.

Fyson, R. and Kitson, D., 2012. Outcomes following adult safeguarding alerts: a critical analysis of key factors. *The Journal of Adult Protection*, 14(2), pp. 93-103.

Garner, M. and Johnson, E., 2006. Operational communication: a paradigm for applied research into police call-handling. *International Journal of Speech Language and the Law*, 13(1), pp. 55-75.

Gee, E., 2020. Ecological Systems Theory in Media Research. *The International Encyclopaedia of Media Psychology*, pp. 1-5.

Gigerenzer, G., 1996. Rationality: why social context matters. Baltes, P. and Stauinger, U., eds., *Interactive Minds: Life-Span Perspectives on the Social Foundation of Cognition*. Cambridge: Cambridge University Press.

Gillespie-Smith, K., Brodie, Z., Collins, K., Deacon, K. and Goodall, K., 2020. Moving towards trauma-informed policing: An exploration of police officers' attitudes and perceptions towards Adverse Childhood Experiences (ACEs). Available at https://research.tees.ac.uk/ws/files/25287212/ACEs_SIPR_Report_FINAL11.08.20.pdf [accessed 5 August 2021].

Gilligan, P. and Manby, M., 2008. The Common Assessment Framework: does the reality match the rhetoric?. *Child & Family Social Work*, 13(2), pp. 177-187.

Gillooly, J.W., 2020. How 911 callers and call-takers impact police encounters with the public: The case of the Henry Louis Gates Jr. arrest. *Criminology & Public Policy*, 19(3), pp. 787-804.

Githens-Mazer, J. and Lambert, R., 2010. Islamophobia and anti-Muslim hate crime: A London case study. Available at https://lemosandcrane.co.uk/resources/Islamophobia_and_Anti-Muslim_Hate_Crime.pdf [accessed 17 January 2021].

Goggin, G., 2008. Disability, media, and the politics of vulnerability. *Asia Pacific Media Educator*, (19), pp. 1-13.

Golden, S., Aston, H. and Durbin, B., 2011. Devon Multi-Agency Safeguarding Hub: Case-study report. Slough: NFER. Available at: <https://www.nfer.ac.uk/publications/LGMX01/LGMX01.pdf> [accessed 2 June 2021].

Goldstein, H., 2018. On problem-oriented policing: the Stockholm lecture. *Crime Science*, 7(1), pp. 1-9.

Goldstein, H., 1990. *Problem Oriented Policing*. New York, McGraw-Hill.

Goldstein, H., 1979. Improving Policing: A Problem oriented Approach. *Crime and Delinquency*, 25(2), pp. 236–258.

Goldstein, H., 1977. *Policing a Free Society*. University of Wisconsin Legal Studies No.1349. Cambridge (MA), USA: Ballinger Pub. Co. Available at <http://ssrn.com/abstract=2596883> [accessed 6 May 2020].

Goode, J. and Lumsden, K., 2018. 'The McDonaldisation of police-academic partnerships: organisational and cultural barriers encountered in moving from research on police to research with police'. *Policing and Society: An International Journal of Research and Policy*, 28(1): pp. 75-89.

Gottschalk, P., 2007. Information systems in police knowledge management. *Electronic Government, An International Journal*, 4(2), pp. 191-203.

Gov.uk, 2019. National Statistics: English indices of deprivation. Available at <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019> [accessed 5th May 2020].

Gov.uk, 2011. Guidance: National Standard for Incident Recording Counting Rules. Available at <https://www.gov.uk/government/publications/the-national-standard-for-incident-recording-nsir-counting-rules> [accessed 3 April 2021].

Gov.uk, n.d., Understand how your council works. Available at <https://www.gov.uk/understand-how-your-council-works> [5 May 2020].

Graham-Kevan, N., Brooks, M., Willan, V.J., Lowe, M., Robinson, P., Khan, R., Stokes, R., Irving, M., Karwacka, M. and Bryce, J., 2015. Repeat victimisation, retraumatisation and victim vulnerability. *The Open Criminology Journal*, 8, pp. 36-48.

Green, S., 2012. Crime, victimisation and vulnerability. Walklate, S., ed., *Handbook of Victims and Victimology*. Abingdon: Routledge, pp. 107-134.

Green, T. and Gates, A., 2014. Understanding the process of professionalisation in the police organisation. *The Police Journal*, 87(2), pp. 75-91.

Greenberg, J.B., 2001. Childhood sexual abuse and sexually transmitted diseases in adults: A review of and implications for STD/HIV programmes. *International Journal of STD & AIDS*, 12(12), pp. 777-783.

Greenfield, V. and Paoli, L., 2022. *Assessing the Harms of Crime: A New Framework for Criminal Policy*. Oxford University Press.

Greig-Midlane, J., 2014. Changing the beat? The impact of austerity on the neighbourhood policing workforce. Available at <https://orca.cardiff.ac.uk/id/eprint/65441/1/Changing%20the%20Beat%202014.pdf> [accessed 10 June 2021].

Grenfell, M.J. ed., 2012. *Pierre Bourdieu: Key Concepts*, 2nd Ed. Durham: Acumen Publishing.

Griffin, A. and May, V., 2012. Narrative analysis and interpretative phenomenological analysis. Seale, C., ed., *Researching Society and Culture*, 3rd edition. London: Sage.

Grint, K., 2010a. Wicked Problems and Leadership. Paper submitted for the Windsor Leadership Programme's, Strategic Leaders event, 27-30 April 2010. Available at <https://www.dajf.org.uk/wp-content/uploads/Keith-Grint-presentation.pdf> [accessed 30 June 2021].

Grint, K., 2010b. Wicked problems and clumsy solutions: the role of leadership. In Brookes, S. and Grint, K., eds, *The New Public Leadership Challenge*. London: Palgrave Macmillan, pp. 169-186.

Grint, K., 2010c. The cuckoo clock syndrome: addicted to command, allergic to leadership. *European Management Journal*, 28(4), pp. 306-313.

Grint, K., 2005. Problems, problems, problems: The social construction of 'leadership'. *Human Relations*, 58(11), pp. 1467-1494.

Grinyer, A., 2002. The anonymity of research participants: assumptions, ethics and practicalities. *Social Research Update*, 36(1). Available at <https://sru.soc.surrey.ac.uk/SRU36.html> [accessed 5 May 2022].

Grønmo, S., 2020. *Social Research Methods*. London: Sage.

Grover, C., 2013. *Crime and Inequality*. London: Willan.

Groves, R.M., Salfati, C.G. and Elliot, D., 2004. The influence of prior offender/victim relationship on offender stalking behavior. *Journal of Investigative Psychology and Offender Profiling*, 1(2), pp. 153-167.

Grundy, E., 2006. Ageing and vulnerable elderly people: *European perspectives*. *Ageing & Society*, 26(1), pp. 105-134.

Guilfoyle, S., 2016. Getting police performance measurement under control. *Policing: A Journal of Policy and Practice*, 10(1), pp. 71-87.

Guilfoyle, S., 2013. *Intelligent Policing*. Axminster: Triarchy Press.

Hadfield, E., Sleath, E., Brown, S. and Holdsworth, E., 2021. A systematic review into the effectiveness of Integrated Offender Management. *Criminology & Criminal Justice*, 21(5), pp. 650-668.

Hagan, F., 1993. *Research Methods in Criminal Justice and Criminology*, 3rd edition. New York: Macmillan.

Hale, C., Hayward, K., Wahidin, A. and Wincup, E., 2013. *Criminology*, 3rd edition. Oxford: Oxford University Press.

Hallett, S., 2017. *Making sense of child sexual exploitation: Exchange, Abuse and Young People*. Bristol, Policy Press.

Hallett, S., 2016. 'An uncomfortable comfortableness': 'Care', child protection and child sexual exploitation. *British Journal of Social Work*, 46(7), pp. 2137-2152.

Hamlyn, B., Phelps, A., Turtle, J. and Sattar, G., 2004. Are special measures working?: evidence from surveys of vulnerable and intimidated witnesses, No. 283. London: Home Office.

Hammond, N. and Kingston, S., 2014. Experiencing stigma as sex work researchers in professional and personal lives. *Sexualities*, 17(3), pp. 329-347.

Harcourt, B.E., 2009. *Illusion of order: The False Promise of Broken Windows Policing*. Cambridge, MA, USA: Harvard University Press.

Harcourt, B.E. and Ludwig, J., 2006. Broken windows: New evidence from New York City and a five-city social experiment. *University of Chicago Law Review*, 73, pp. 271-320.

Harding, E. and Kane, M., 2011. Joint strategic needs assessment: reconciling new expectations with reality. *Journal of Integrated Care*, 19(6), pp. 37-44.

Harmon, A., 2015. Vulnerable populations. *Salem Press Encyclopaedia*, January 2015. Database: Research Starters.

Harradine, S., Kodz, J., Lemetti, F. and Jones, B., 2004. *Defining and Measuring Anti-Social Behaviour*. Home Office Development and Practice Report, 26.

Harris, L. and Hodges, K., 2019. Responding to complexity: improving service provision for survivors of domestic abuse with 'complex needs'. *Journal of Gender-Based Violence*, 3(2), pp. 167-184.

Harron, K., Dibben, C., Boyd, J., Hjern, A., Azimae, M., Barreto, M.L. and Goldstein, H., 2017a. Challenges in administrative data linkage for research. *Big Data & Society*, 4(2), pp. 1-12.

Harron, K., Hagger-Johnson, G., Gilbert, R. and Goldstein, H., 2017b. Utilising identifier error variation in linkage of large administrative data sources. *BMC medical research methodology*, 17(1), pp. 1-9.

Hawkins, J.D. and Catalano Jr, R.F., 1992. *Communities that care: Action for drug abuse prevention*. Hoboken, NJ, USA: Jossey-Bass.

Hayden, C. and Jenkins, C., 2014. 'Troubled Families' Programme in England: 'wicked problems' and policy-based evidence. *Policy Studies*, 35(6), pp. 631-649.

Haynes, P., 2015. *Managing Complexity in the Public Services*. Maidenhead: Open University Press.

Heale, R. and Forbes, D., 2013. Understanding triangulation in research. *Evidence-Based Nursing*, 16(4), p. 98.

Heiskanen, M., 2010. Trends in police recorded crime. Harrendorf, S., Heiskanen, M. and Malby, S. eds., *International Statistics on Crime and Justice*. Helsinki: European Institute for Crime Prevention and Control, affiliated with the United Nations (HEUNI), pp. 21-48.

Helsby, J., Carton, S., Joseph, K., Mahmud, A., Park, Y., Navarrete, A., Ackermann, K., Walsh, J., Haynes, L., Cody, C. and Patterson, M.E., 2018. Early intervention systems: Predicting adverse interactions between police and the public. *Criminal Justice Policy Review*, 29(2), pp. 190-209.

Henning, K. and Feder, L., 2005. Criminal prosecution of domestic violence offenses: An investigation of factors predictive of court outcomes. *Criminal Justice and Behavior*, 32(6), pp. 612-642.

Henry, S., 2013. Crime. McLaughlin, E. and Muncie, J., eds., *The Sage Dictionary of Criminology*. London: Sage, pp. 85-87.

Henry, S. and Lanier, M., eds., 2001. *What is crime? Controversies Over the Nature of Crime and What to do About it*. Lanham, Maryland, USA: Rowman & Littlefield.

Henshall, A., Hoggart, L., Chandler, V., Simms, D. and Webb, J., 2013. *Assessing the Early Impact of Multi Agency Safeguarding Hubs (MASH) in London*. London Councils and University of Greenwich.

Henshaw, M. and Thomas, S., 2012. Police encounters with people with intellectual disability: prevalence, characteristics and challenges. *Journal of Intellectual Disability Research*, 56(6), pp. 620-631.

Herbert, S., 2006. Tangled up in blue: Conflicting paths to police legitimacy. *Theoretical Criminology*, 10(4), pp. 481-504.

Herring, C. and Henderson, L., 2012. From affirmative action to diversity: Toward a critical diversity perspective. *Critical Sociology*, 38(5), pp. 629-643.

Herrington, V. and Colvin, A., 2016. Police leadership for complex times. *Policing: A Journal of Policy and Practice*, 10(1), pp. 7-16.

Herrington, V. and Roberts, K., 2012. Addressing psychological vulnerability in the police suspect interview. *Policing: A Journal of Policy and Practice*, 6(2), pp. 177-186.

Herrington, V. and Serbie, J. 2021. Policing the future – the future of policing. *Policing Insight*, 24th June 2021. Available at: <https://policinginsight.com/features/analysis/policing-the-future-the-future-of-policing/> [accessed 28 June 2021].

Hesketh, I. and Cooper, C., 2017a. *Managing Health and Wellbeing in the Public Sector: A Guide to Best Practice*. Abingdon: Routledge.

Hesketh, I. and Cooper, C., 2017b. Measuring the people fleet: general analysis, interventions and needs. *Strategic HR Review*, 16(1), pp. 17-23.

Hewitt, A. and Beauregard, E., 2014. Sexual crime and place: The impact of the environmental context on sexual assault outcomes. *Journal of Criminal Justice*, 42(5), pp. 375-383.

Hibberd, M., 2021. Police targets: knowing the difference between apparent performance and actual performance. Police Foundation, 16 August 2021. Available at <https://www.police-foundation.org.uk/2021/08/police-targets-knowing-the-difference-between-apparent-performance-and-actual-performance/> [accessed 17 August 2021].

Hickman, M.J., 2014. Police Administrative Records Social Science Data. Reising, M., and Kane, R., eds., *The Oxford Handbook of Police and Policing*. Oxford: Oxford University Press. pp. 433-448.

Higgins, A. and Hales, G., 2016. Police Effectiveness in a Changing World Paper 1. The Police Foundation. Available at: http://www.police-foundation.org.uk/uploads/holding/projects/changing_world_paper_1 [accessed 10 May 2018].

Hinkle, J.C., Weisburd, D., Telep, C.W. and Petersen, K., 2020. Problem-oriented policing for reducing crime and disorder: An updated systematic review and meta-analysis. *Campbell Systematic Reviews*, 16(2), e1089.

Hird, C. and Ruparel, C., 2007. *Seasonality in Recorded Crime: Preliminary Findings*, 2(7), London: Home Office.

HMICFRS, 2021. Policing inspection programme and framework. Available at <https://www.justiceinspectorates.gov.uk/hmicfrs/publication-html/policing-inspection-programme-and-framework-2021-22-2/> [accessed 21 August 2021].

HMICFRS, 2019. Crime and incident recording process: Available at: <https://www.justiceinspectors.gov.uk/hmicfrs/our-work/article/crime-data-integrity/crime-recording-process/> [accessed on 30 August 2019].

HMICFRS, 2018a. Vulnerable People. Available at: <https://www.justiceinspectors.gov.uk/hmicfrs/glossary/vulnerable-people/> [accessed 4 October 2019].

HMICFRS, 2018b. What we do. Available at: <https://www.justiceinspectors.gov.uk/hmicfrs/about-us/> [accessed on 5th May 2020].

HMICFRS, 2018c. Basic Command Unit Reports. Available at <https://www.justiceinspectors.gov.uk/hmicfrs/our-work/article/basic-command-unit-bcu-reports/> [accessed 10 June 2021].

HMICFRS, 2015. PEEL: Police effectiveness 2015 (vulnerability) - A national overview. Available at <https://www.justiceinspectors.gov.uk/hmicfrs/publications/police-effectiveness-vulnerability-2015/> [accessed 10 February 2016].

Hollin, C., 1992. *Criminal Behaviour: A Psychological Approach to Explanation and Prevention*. London: The Farmer Press.

Hollomotz, A., 2009. Beyond 'vulnerability': An ecological model approach to conceptualizing risk of sexual violence against people with learning difficulties. *British Journal of Social Work*, 39(1), pp. 99-112.

Home Office, 2021. Crime Recording General Rules. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/992833/count-general-jun-2021.pdf [accessed 21 January 2022].

Home Office, 2019. Home Office Counting Rules for Recorded Crime. Available at: <https://data.gov.uk/dataset/695f6775-3e51-4dd4-911a-19575638384c/home-office-counting-rules-for-recorded-crime> [accessed on 30 August 2019].

Home Office, 2018. Management of Risk in Law Enforcement (MoRiLE) based scoring: standards. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/679814/Tactical-MoRiLE-Scoring-Standards-v1.0EXT.pdf [accessed 12 August 2021].

Home Office, 2016. Information sharing for community safety: guidance and practice advice.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/97842/guidance.pdf [accessed 12 August 2021].

Hough, M. and Mayhew, P., 1983. *The British Crime Survey: First Report*. Home Office Research Study 76. London: HMSO.

Hough, M., 2020. *Good Policing: Trust, Legitimacy and Authority*. Bristol: Policy Press.

Houghton, R.J., Baber, C., McMaster, R., Stanton, N.A., Salmon, P., Stewart, R. and Walker, G., 2006. Command and control in emergency services operations: a social network analysis. *Ergonomics*, 49(12-13), pp. 1204-1225.

House, P.D. and Neyroud, P.W., 2018. Developing a crime harm index for Western Australia: The WACHI. *Cambridge Journal of Evidence-Based Policing*, 2(1), pp. 70-94.

Howes, L.M., Bartkowiak-Théron, I. and Asquith, N.L., 2017. A federation of clutter: the burgeoning language of vulnerability in Australian policing policies. Asquith, N.L., Bartkowiak-Théron, I. and Roberts, K., eds., *Policing Encounters with Vulnerability*. Cham, Switzerland: Palgrave Macmillan, pp. 89-117.

Howitt, D., 2006. *Introduction to Forensic and Criminal Psychology*. Harlow: Pearson Education.

Hox, J.J. and Boeije, H.R., 2005. Data collection, primary versus secondary. *Encyclopaedia of Social Measurement*, pp. 593-599. Open Access, available at <https://dspace.library.uu.nl/handle/1874/23634> [accessed 5 May 2022].

Huey, L., 2016. Harm-focused policing. *Journal of Community Safety and Well-Being*, 1(3), pp. 83-85.

Huey, L., Ferguson, L., and Koziarski, J., 2021. The Irrationalities of rationality in police data processes [online]. *Policing and Society*. Available at: <https://www.tandfonline.com/doi/full/10.1080/10439463.2021.2007245?scroll=top&needAccess=true> [accessed 24 November 2021].

Hughes, G. and Rowe, M., 2007. Neighbourhood policing and community safety: Researching the instabilities of the local governance of crime, disorder and security in contemporary UK. *Criminology & Criminal Justice*, 7(4), pp. 317-346.

Hurst, S.A., 2008. Vulnerability in research and health care; describing the elephant in the room?. *Bioethics*, 22(4), pp. 191-202.

Iganski, P., 2001. 'Hate Crimes Hurt More'. *American Behavioural Scientist*, 45 (4), pp. 626-638.

Iganski, P. and Lagou, S., 2015. Hate crimes hurt some more than others: Implications for the just sentencing of offenders. *Journal of Interpersonal Violence*, 30(10), pp. 1696-1718.

Ignatans, D., 2020. How swiftly does re-victimisation occur? Evidence from surveys of victims. *Crime Prevention and Community Safety*, 22(3), pp. 248-260.

Inmon, W.H., 1995. What is a data warehouse?. *Prism Tech Topic*, 1(1), pp. 1-5.

Innes, H. and Innes M., 2013. Triangle of Risk: The Three Vulnerabilities of ASB. *Police Professional*, No. 349, 04 April 2013. Aylesbury: Verdant Media.

Innes, M., 2010. A 'mirror' and a 'motor': Researching and reforming policing in an age of austerity. *Policing: A Journal of Policy and Practice*, 4(2), pp. 127-134.

Innes, M., 2004. Signal crimes and signal disorders: Notes on deviance as communicative action. *The British Journal of Sociology*, 55(3), pp. 335-355.

Innes, M. and Fielding, N., 2002. From community to communicative policing: 'Signal crimes' and the problem of public reassurance. *Sociological Research Online*, 7(2), pp. 56-67.

Jackson, D.B. and Vaughn, M.G., 2018. Promoting health equity to prevent crime. *Preventive Medicine*, 113, pp. 91-94.

Jackson, J., 2009. A psychological perspective on vulnerability in the fear of crime. *Psychology, Crime & Law*, 15(4), pp. 365-390.

Jackson, B.A., Towe, V.L., Wagner, L., Hunt, P., Greathouse, S. and Hollywood, J.S., 2017. Managing officer behavioural risk using early intervention systems: addressing system design challenges for law enforcement and corrections environments. *Policing: A Journal of Policy and Practice*, 11(1), pp.103-117.

James, A., 2016. *Understanding Police Intelligence Work*. Bristol: Policy Press.

James, A., Phythian, M., Wadie, F. and Richards, J., 2017. The road not taken: understanding barriers to the development of police intelligence practice. *The International Journal of Intelligence, Security, and Public Affairs*, 19(2), pp. 77-91.

Jamison, D.C., 2003. Structured query language (SQL) fundamentals. *Current protocols in bioinformatics*, (1), pp. 9-2.

Jansen, R.J., Van Egmond, R., De Ridder, H. and Silvester, S., 2013. Transitional Journey Maps: Capturing the dynamics of operational policing. Proceedings of the Human Factors and Ergonomics Society Europe Chapter 2013 Annual Conference, Turino, Italy, 16-18 October 2013. Human Factors and Ergonomics Society.

Jansson, K., 2007. *British Crime Survey-Measuring Crime for 25 Years*. London: Home Office.

Jensen, R.H., 2019. What has place got to do with it? Hot spots policing to address physical and mental health. *Journal of Contemporary Criminal Justice*, 35(2), pp. 124-141.

Jeyasingham, D., 2017. Soft, small, malleable, and slow: Corporeal form and movement in social workers' and police officers' talk about practice in a Multi-Agency Safeguarding Hub. *Child & Family Social Work*, 22(4), pp. 1456-1463.

Johnson, S.D., Davies, T., Murray, A., Ditta, P., Belur, J. and Bowers, K., 2017. Evaluation of operation swordfish: a near-repeat target-hardening strategy. *Journal of Experimental Criminology*, 13(4), pp. 505-525.

Jones, D.J., 2020. Pandemic policing: Highlighting the need for trauma-informed services during and beyond the COVID-19 crisis. *Journal of Community Safety and Well-Being*, 5(2), pp. 69-72.

Jones, P. and Elias, P., 2006. Administrative data as a research resource: a selected audit. Available at <http://eprints.ncrm.ac.uk/452/1/Admin%2520Data%2520selected%2520audit%2520Dec06.pdf> [accessed 28 March 2021].

Joyce, P., 2011. Police reform: from police authorities to police and crime commissioners. *Safer Communities*, 10(4), pp. 5-13.

Júnior, D.P. and Muniz, J., 2006. 'Stop or I'll call the Police!' The Idea of Police, or the Effects of Police Encounters Over Time. *British Journal of Criminology*, 46(2), pp. 234-257.

Jupp, V., 2013. Hidden Crime. McLaughlin, E. and Muncie, J., eds., *The Sage Dictionary of Criminology*. London: Sage, pp. 220-222.

Jupp, V., 2000. Formulating research problems. Jupp, V., Davies, P. and Francis, P., eds., *Doing Criminological Research*. London: Sage.

Kahneman, D., 2011. *Thinking, Fast and Slow*. London: Macmillan.

Kanji, G.K., 1999. *100 Statistical Tests*. London: Sage.

Karela, C. and Petrogiannis, K., 2020. Young children's emotional well-being after parental divorce: discrepancies between "resilient" and "vulnerable" children. *Journal of Educational and Developmental Psychology*, 10(1), pp. 18-28.

Karlsson, I. and Christianson, S.Å., 2003. The phenomenology of traumatic experiences in police work. *Policing: An International Journal of Police Strategies and Management*, 26(3), pp. 419-438.

Kärrholm, F., Neyroud, P. and Smaaland, J., 2020. Designing the Swedish Crime Harm Index: an evidence-based strategy. *Cambridge Journal of Evidence-Based Policing*, 4, pp. 15-33.

Kawachi, I., Kennedy, B., and Wilkinson, R., 1999. Crime: Social Disorganization and Relative Deprivation. *Social Science and Medicine*, 48(6): pp. 719-731.

Keay, S., 2021. Policing definitions on Vulnerability: do we need one? Asquith, N. and Bartkowiak-Théron, I., *Policing Practices and Vulnerable People*. Cham, Switzerland: Palgrave Macmillan.

Keay, S. and Kirby, S., 2018. Defining vulnerability: from the conceptual to the operational. *Policing: A Journal of Policy and Practice*, 12(4), pp. 428-438.

Kelling, G.L. and Moore, M.H., 1989. *The Evolving Strategy of Policing* (No. 4). US Department of Justice, Office of Justice Programs, National Institute of Justice.

Kelly, M., 2000. Inequality and crime. *Review of Economics and Statistics*, 82(4), pp. 530-539.

Keren, G. and Teigen, K.H., 2004. Yet another look at the heuristics and biases approach. Koehler, D.J., and Harvey, N., eds., *Blackwell Handbook of Judgment and Decision Making*. Oxford: Blackwell, pp. 89-109.

Khan, L., 2013. Spotting vulnerability. *Police Professional*, 6th June 2013.

Kiely, J.A. and Peek, G.S., 2002. The culture of the British police: Views of police officers. *Service Industries Journal*, 22(1), pp. 167-183.

Killias, M. and Clerici, C., 2000. Different measures of vulnerability in their relation to different dimensions of fear of crime. *The British Journal of Criminology*, 40(3), pp. 437-450.

Kilpatrick, D., Veronen, L., Sauners, B., Best., C., Amick-McMullan, A. and Paduhovich, J., 1987. *The Psychological Impact of Crime: A Study of Randomly Surveyed Crime Victims*. National Institute of Justice. Available at <https://www.ojp.gov/pdffiles1/Digitization/107740NCJRS.pdf> [accessed 13 August 2021].

King, C., 2018. 'It depends what you class as vulnerable': risk discourse and the framing of vulnerability in health visiting policy and practice. *Families, Relationships and Societies*, 7(1), pp. 39-54.

King, C. and Murphy, G.H., 2014. A systematic review of people with autism spectrum disorder and the criminal justice system. *Journal of Autism and Developmental Disorders*, 44(11), pp. 2717-2733.

Kingston, S. and Thomas, T., 2017. The Anti-social Behaviour, Crime and Policing Act 2014: implications for sex workers and their clients. *Policing and Society*, 27(5), pp. 465-479.

Kingston, S. and Webster, C., 2015. The most 'undeserving' of all?: how poverty drives young men to victimisation and crime. *Journal of Poverty and Social Justice*, 23(3), pp. 215-227.

Kipnis, K., 2001. Vulnerability in research subjects: A bioethical taxonomy. *Ethical and Policy Issues in Research Involving Human Participants*, 2, Commissioned Papers and Staff Analysis. Bethesda, Maryland August 2001. G-1, pp. 209-221.

Kirby, S., 2020. Repeat Callers to Police in Lancashire, England. Scott, M.S., and Clarke, R.V. eds., *Problem-Oriented Policing: Successful Case Studies*. London: Routledge, pp. 158-167.

Kirby, S., 2013. *Effective Policing: Implementation in Theory and Practice*. Basingstoke: Palgrave MacMillan.

Kirby, S. and Keay, S., 2021. *Improving Intelligence Analysis in Policing*. Abingdon: Routledge.

Koehler, D.J. and Harvey, N., eds., *Blackwell Handbook of Judgment and Decision Making*. Oxford: Blackwell, pp. 89-109.

Koivunen, A., Kyrölä, K. and Ryberg, I., 2018. Vulnerability as a political language. Koivunen, A., Kyrölä, K. and Ryberg, I., eds., *The Power of Vulnerability: Mobilising Affect in Feminist, Queer and Anti-Racist Media Cultures*. Manchester: Manchester University Press, pp. 1-26.

Kruttschnitt, C., 2016. The politics, and place, of gender in research on crime. *Criminology*, 54(1), pp. 8-29.

Kruttschnitt, C., 2013. Gender and crime. *Annual Review of Sociology*, 39, pp. 291-308.

Lambert, M. and Crossley, S., 2017. 'Getting with the (troubled families) programme': a review. *Social Policy and Society*, 16(1), pp. 87-97.

Lanier, M. and Henry, S., 2001. Crime in Context: the scope of the problem. Henry, S. and Lanier, M., eds., *What is crime? Controversies over the nature of crime and what to do about it*. Lanham, Maryland, USA: Rowman & Littlefield.

Laycock, G., 2005. Defining crime science. Smith, M.J., and Tilley, N., eds., *Crime Science: New Approaches to Preventing and Detecting Crime*. Cullompton: Willan.

Leese, M. and Russell, S., 2017. Mental health, vulnerability and risk in police custody. *The Journal of Adult Protection*, 19(5), pp. 274-283.

Leishman, F., Loveday, B. and Savage, S.P., eds., 2000. *Core Issues in Policing*. London: Longman.

Levasseur, M., Lussier-Therrien, M., Biron, M.L., Dubois, M.F., Boissy, P., Naud, D., Dubuc, N., Coallier, J.C., Calvé, J. and Audet, M., 2021. Scoping study of definitions and instruments measuring vulnerability in older adults. *Journal of the American Geriatrics Society* [online]. Available from: <https://agsjournals.onlinelibrary.wiley.com/doi/10.1111/jgs.17451> [accessed 15 November 2021].

Lewis, J. and Lewis, S.A., 2014. Processes of vulnerability in England? Place, poverty and susceptibility. *Disaster Prevention and Management*, 23(5), pp. 586-609.

Lieber, E. and Weisner, T.S., 2010. Meeting the practical challenges of mixed methods research. Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social and Behavioral Research*, 2nd edition. Thousand Oaks, USA: Sage.

Liebling, A., 1995. Vulnerability and prison suicide. *The British Journal of Criminology*, 35(2), pp. 173-187.

Liebling, A., Maruna, S. and McAra, L., 2017. *The Oxford Handbook of Criminology*, 6th edition. Oxford: Oxford University Press.

Lister, S. and Rowe, M., 2015. Electing police and crime commissioners in England and Wales: prospecting for the democratisation of policing. *Policing and Society*, 25(4), pp. 358-377.

Lister, S., 2014. Scrutinising the role of the Police and Crime Panel in the new era of police governance in England and Wales. *Safer Communities*, 13(1), pp. 22-31.

Lister, S., 2013. The new politics of the police: police and crime commissioners and the 'operational independence' of the police. *Policing: A Journal of Policy and Practice*, 7(3), pp. 239-247.

Loader, I., 2014. Why do the police matter? Beyond the myth of crime-fighting. Brown, J., ed. *The Future of Policing*. Abdingdon: Routledge.

Lockwood, D. and Prohaska, A., 2015. Police Officer Gender and Attitudes toward Intimate Partner Violence: How policy can eliminate stereotypes. *International Journal of Criminal Justice Sciences*, 10(1), pp. 77-90.

Longstaff, A., Willer, J., Chapman, J., Czarnomski, S. and Graham, J., 2015. *Neighbourhood policing: Past, Present and Future*. The Police Foundation, pp. 25-31.

Loveday, B., 2015. Police management and workforce reform in a period of austerity. Wankhade, P., and Weir, D., eds., *Police Services*. Cham: Springer, pp. 115-127.

Loveday, B., 2013. Police and Crime Commissioners: the changing landscape of police governance in England and Wales: their potential impact on local accountability, police service delivery and community safety. *International Journal of Police Science & Management*, 15(1), pp. 22-29.

Loveday, B., 2006. The police and community safety. Squires, P., ed., *Community Safety: Critical Perspectives on Policy and Practice*. Bristol: Policy Press, pp. 111-124.

Lowerson, A.J., 2022. Proportionate? The Metropolitan Police Service Response to the Sarah Everard Vigil: Leigh v Commissioner of Police of the Metropolis [2022] EWHC 527 (Admin). *The Journal of Criminal Law*, 86(4), pp. 287-291.

Lum, C., 2009. Translating police research into practice. *Ideas in American Policing*, 11, pp. 1-16.

Lum, C. and Koper, C.S., 2017. *Evidence-Based Policing: Translating Research into Practice*. Oxford: Oxford University Press.

Lum, C. and Koper, C.S., 2015. Evidence-based policing. *Critical Issues in Policing: Contemporary Readings*, pp. 260-274.

Luna, F., 2009. Elucidating the concept of vulnerability: Layers not labels. *International Journal of Feminist Approaches to Bioethics*, 2(1), pp. 121-139.

Luna, F. and Vanderpoel, S., 2013. Not the usual suspects: addressing layers of vulnerability. *Bioethics*, 27(6), pp. 325-332.

Lydersen, S., Fagerland, M.W. and Laake, P., 2009. Recommended tests for association in 2×2 tables. *Statistics in medicine*, 28(7), pp. 1159-1175.

Mack, K.Y., Leiber, M.J., Featherstone, R.A. and Monserud, M.A., 2007. Reassessing the family-delinquency association: Do family type, family processes,

and economic factors make a difference?. *Journal of Criminal Justice*, 35(1), pp. 51-67.

Mackenzie, C., Rogers, W. and Dodds, S. eds., 2014. *Vulnerability: New Essays in Ethics and Feminist Philosophy*. Oxford: Oxford University Press.

Maguire, M., 2012. Criminal statistics and the construction of crime. Maguire, M., Morgan, R. and Reiner, R., eds., *The Oxford Handbook of Criminology*, 5th Edition. Oxford: Oxford University Press. Available at: https://www.researchgate.net/publication/265082400_Criminal_Statistics_and_the_Construction_of_Crime [accessed 29 August 2021].

Maguire, M., 2007. Crime Data and Statistics. Maguire, M., Reiner, R. and Morgan, R., eds., *The Oxford Handbook of Criminology*, 4th edition. Oxford: Oxford University Press.

Malleson, N. and Andresen, M.A., 2015. Spatio-temporal crime hotspots and the ambient population. *Crime Science*, 4(1), pp. 1-8. Open Access, available at: <https://link.springer.com/article/10.1186/s40163-015-0023-8> [accessed 1 October 2021].

Malone, R.E., 1996. Almost 'like family': emergency nurses and 'frequent flyers'. *Journal of Emergency Nursing*, 22(3), pp. 176-183.

Marinoni, G., Van't Land, H. and Jensen, T., 2020. The impact of Covid-19 on higher education around the world. *IAU Global Survey Report*, 23. Available at https://www.uniss.it/sites/default/files/news/iau_covid19_and_the_survey_report_final_may_2020.pdf [5 May 2022].

Marmot, M., 2020. Health equity in England: The Marmot review 10 years on. *The BMJ*, 368:m693, pp1-4.

Marmot, M., 2005. Social determinants of health inequalities. *The Lancet*, 365 (9464), pp. 1099-1104.

Marmot, M. and Allen, J.J., 2014. Social determinants of health equity. *American Journal of Public Health*, 104, no. S4 (September 1, 2014): pp. S517-S519. Available at: <https://ajph.aphapublications.org/doi/10.2105/AJPH.2014.302200> [accessed 10 June 2019].

Martin, D. and Tong, S., 2016. Challenges and changes in policing research. Brunger, M., Tong, S. and Martin, D., eds., *Introduction to Policing Research: Taking Lessons from Practice*. Abingdon: Routledge.

Maslow, A., 1943. A theory of human motivation. *Psychological review*, 50, pp. 370-396. Available at <http://www.excelcentre.net/TheoryHumanMotivation.pdf> [accessed 24 April 2021].

Mason, D., Hillenbrand, C. and Money, K., 2014. Are informed citizens more trusting? Transparency of performance data and trust towards a British police force. *Journal of Business Ethics*, 122(2), pp. 321-341.

Matthews, B. and Ross, L. 2010. *Research Methods: A Practical Guide for the Social Sciences*. Harlow: Pearson Education.

May, T., 2001. *Social Research: Issues, Methods and Research*. Maidenhead: McGraw-Hill Education.

May, T. and Hunter, G., 2018. View from the shop floor: Informing the Police Educational Qualification Framework: graduate perspectives of the Police Now Leadership Development Programme. Home Office Project Report. Available at: <https://eprints.bbk.ac.uk/id/eprint/26135/1/View%20From%20The%20Shop%20Floor%20-%20ICPR%20Working%20Paper%20-%20May%20and%20Hunter%20Feb%202018.pdf> [accessed 10 September 2020].

McCall, R. and Burge, J., 2016. Untangling wicked problems. *AI EDAM*, 30(2), pp. 200-210.

McCue, C., 2014. *Data Mining and Predictive Analysis: Intelligence Gathering and Crime Analysis*. Waltham, MA, USA: Butterworth-Heinemann.

- McDaniel, J.L., 2018. Evaluating the ability and desire of police and crime commissioners (PCCs) to deliver community-oriented policing in practice. Leventakis, G. and Haberfeld, M.R., eds., *Societal Implications of Community-Oriented Policing and Technology*. Cham, Switzerland: Springer, pp. 39-46.
- McDowall, D. and Loftin, C., 2009. Do US city crime rates follow a national trend? The influence of nationwide conditions on local crime patterns. *Journal of Quantitative Criminology*, 25(3), pp. 307-324.
- McDowall, D., Loftin, C. and Pate, M., 2012. Seasonal cycles in crime, and their variability. *Journal of Quantitative Criminology*, 28(3), pp. 389-410.
- McKean, J.B. and Byers, B., 2000. *Data Analysis for Criminal Justice and Criminology: Practice and Applications*. Boston, USA: Allyn and Bacon.
- McKimmie, B.M., Masser, B.M. and Bongiorno, R., 2014. What counts as rape? The effect of offense prototypes, victim stereotypes, and participant gender on how the complainant and defendant are perceived. *Journal of Interpersonal Violence*, 29(12), pp. 2273-2303.
- McLaughlin, E. and Muncie, J., eds., 2013. *The Sage Dictionary of Criminology*. London: Sage.
- McLean, K., Wolfe, S.E., Rojek, J., Alpert, G.P. and Smith, M.R., 2020. Police officers as warriors or guardians: Empirical reality or intriguing rhetoric?. *Justice Quarterly*, 37(6), pp. 1096-1118.
- McLean, N. and Marshall, L.A., 2010. A front line police perspective of mental health issues and services. *Criminal Behaviour and Mental Health*, 20(1), pp. 62-71.
- McManus, M.A., Barton, E., Newbury, A. and Roderick, J., 2018. *Adverse childhood Experiences: Breaking the Generational Cycle of Crime*. Public Health Wales NHS Trust. Available at <http://researchonline.ljmu.ac.uk/id/eprint/12954/> [accessed 12 August 2021].

Means, R., 2007. Safe as houses? Ageing in place and vulnerable older people in the UK. *Social Policy and Administration*, 41(1), pp. 65-85.

Mechanic, D. and Tanner, J., 2007. Vulnerable people, groups, and populations: societal view. *Health Affairs*, 26(5), pp. 1220-1230.

Menichelli, F., 2021. Governing through vulnerability in austerity England. *European Journal of Criminology*, 18(5), pp. 695-712.

Menichelli, F., 2020. Transforming the English model of community safety: From crime and disorder to the safeguarding of vulnerable people. *Criminology & Criminal Justice*, 20(1), pp. 39-56.

Menkes, D.B. and Bendelow, G.A., 2014. Diagnosing vulnerability and “dangerousness”: police use of Section 136 in England and Wales. *Journal of Public Mental Health*, 13(2), pp. 70-82.

Millie, A., 2014. What are the police for? Re-thinking policing post-austerity. In Brown, J.M., ed., *The Future of Policing*. Abingdon: Routledge, pp. 82-93.

Millie, A. and Bullock, K., 2012. Re-imagining policing post-austerity. *British Academy Review*, 19(1), pp. 16-18.

Ministry of Justice, 2021. Code of practice for victims of crime in England and Wales (Victim’s Code). Available at www.gov.uk/government/publications/the-code-of-practice-for-victims-of-crime/code-of-practice-for-victims-of-crime-in-england-and-wales-victims-code [accessed 29 April 2021].

Ministry of Justice, 2015. Code of Practice for Victims of Crime. Available at: https://www.cps.gov.uk/sites/default/files/documents/legal_guidance/OD_000049.pdf [accessed 3 September 2019].

Miró-Llinares, F. and Moneva, A., 2019. What about cyberspace (and cybercrime alongside it)? A reply to Farrell and Birks “Did cybercrime cause the crime drop?”. *Crime Science*, 8(1), pp. 1-5.

- Miró, F., 2014. Routine activity theory. Miller, J.M., ed., *The Encyclopedia of Theoretical Criminology*. Chichester: Wiley, pp. 1-7.
- Misztal, B., 2011. *The Challenges of Vulnerability: In Search of Strategies for a Less Vulnerable Social Life*. London: Palgrave, Macmillan.
- Mitchell, R.J., 2019. The usefulness of a crime harm index: analyzing the Sacramento Hot Spot Experiment using the California Crime Harm Index (CA-CHI). *Journal of Experimental Criminology*, 15(1), pp. 103-113.
- Mitrović, V., 2015. Resilience: detecting vulnerability in marginal groups. *Disaster Prevention and Management*, 24(2), pp. 185-200.
- Moore, M.H. and Braga, A.A., 2003. Measuring and improving police performance: The lessons of Compstat and its progeny. *Policing: An International Journal of Police Strategies & Management*, 26(3), pp. 439-453.
- Morrison, W., 2013. What is crime? Contrasting definitions and perspectives. Hale, C., Hayward, K., Wahidin, A. and Wincup, E. eds., *Criminology*. Oxford: Oxford University Press.
- Moss, K. and Pease, K., 2004. Data sharing in crime prevention: why and how. *Crime Prevention and Community Safety*, 6(1), pp. 7-12.
- Moyle, L., 2019. Situating vulnerability and exploitation in street-level drug markets: Cuckooing, commuting, and the "County Lines" drug supply model. *Journal of Drug Issues*, 49(4), pp. 739-755.
- Mulcahy, H., 2004. 'Vulnerable family' as understood by public health nurses. *Community Practitioner*, 77(7), pp. 257-260.
- Mulholland, P. and Cole, T., 2021. A Comparison of Attribute-Focused and Harm-Focused Methods for Assessing the Risk of Organized Crime Groups: Are They in Agreement?. *Policing: A Journal of Policy and Practice*, 15(2), pp. 1367-1383.

Munro, V.E., 2017. Shifting sands? Consent, context and vulnerability in contemporary sexual offences policy in England and Wales. *Social & Legal Studies*, 26(4), pp. 417-440.

Munro, V.E. and Scoular, J., 2012. Abusing vulnerability? Contemporary law and policy responses to sex work in the UK. *Feminist Legal Studies*, 20(3), pp. 189-206.

Murphy, P., Eckersley, P. and Ferry, L., 2017. Accountability and transparency: Police forces in England and Wales. *Public Policy and Administration*, 32(3), pp. 197-213.

Nation, M., Christens, B.D., Bess, K.D., Shinn, M., Perkins, D.D. and Speer, P.W., 2020. Addressing the problems of urban education: An ecological systems perspective. *Journal of Urban Affairs*, 42(5), pp. 715-730.

NCPE, 2005a. Guidance on the National Intelligence Model. National Centre for Policing Excellence, Centrex.

NCPE, 2005b. Code of Practice on the Management of Police Information. Available at <https://library.college.police.uk/docs/APPref/Management-of-Police-Information.pdf> [accessed 10 June 2021].

Neal, J.W. and Neal, Z.P., 2013. Nested or networked? Future directions for ecological systems theory. *Social Development*, 22(4), pp. 722-737.

Nelson, A. L., Bromley, R. D., and Thomas, C. J., 2001. Identifying micro-spatial and temporal patterns of violent crime and disorder in the British city centre. *Applied Geography*, 21(3), pp. 249-274.

Neusteter, S.R., Subramanian, R., Trone, J., Khogali, M. and Reed, C., 2019. *Gatekeepers: The Role of Police in Ending Mass Incarceration*. Vera Institute of Justice.

Newburn, T. and Stanko, E.A., 2002. When men are victims: The failure of victimology. Jewkes, Y. and Letherby, G., eds., *Criminology: A Reader*. London: Sage, pp. 262-73.

Newman, W.L., 1997. *Social Research Methods: Qualitative and Quantitative Approaches*, 3rd edition. Needham Heights, MA, USA: Allyn and Bacon.

Newton, A. and Felson, M., 2015. Crime patterns in time and space: The dynamics of crime opportunities in urban areas. *Crime Science*, 4(1), pp. 1-5.

Newton, A, and Hirschfield, A., 2009. Measuring violence in and around licensed premises: the need for a better evidence base. *Crime Prevention and Community Safety: An International Journal*, 11(3), pp. 171–188.

Neyroud, P., 2008. Past, present and future performance: Lessons and prospects for the measurement of police performance. *Policing: A Journal of Policy and Practice*, 2(3), pp. 340-348.

NHS, 2022. NHS Trust. Available at https://www.datadictionary.nhs.uk/nhs_business_definitions/nhs_trust.html [accessed 5 May 2022].

NHS, n.d. Clinical Commissioning Groups (CCGs). Available at <https://www.england.nhs.uk/commissioning/who-commissions-nhs-services/ccgs/> [accessed 28 March 2021].

NHS Confederation, 2021. What are clinical commissioning groups? Available at <https://www.nhsconfed.org/articles/what-are-clinical-commissioning-groups> [accessed 10 June 2021].

Noakes, L. and Wincup, E., 2004. *Criminological Research: Understanding Qualitative Methods*. London: Sage.

Norman, J. and Williams, E., 2017. Putting learning into practice: Self reflections from cops. *European Law Enforcement Research Bulletin*, (3), pp. 197-203.

NPCC, 2016. Policing Vision 2025. Available at <https://www.npcc.police.uk/documents/Policing%20Vision.pdf> [accessed 24 April 2018].

NPCC, 2015. National Policing Crime Prevention Strategy. Available at: <https://www.npcc.police.uk/documents/crime/2016/Final%20A4%20National%20Policing%20Crime%20Prevention%20Strategy.pdf> [accessed 3 September 2019].

NPIA, 2011. The National Standard for Incident Recording. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/116658/count-nsir11.pdf [accessed 28 March 2020].

Nyamathi, A., 2007. *Vulnerable Populations*. Springer Publishing Company.

Nyamathi, A., 1998. Vulnerable populations: A continuing nursing focus. *Nursing Research*, 47(2), pp. 65-66.

O'Neill, M., 2013. Playing nicely with others: lessons from successes in partnership working. Brown, J., ed., *The Future of Policing*. Abingdon: Routledge, pp. 203-216.

O'Malley, R.L. and Holt, K.M., 2020. Cyber sextortion: an exploratory analysis of different perpetrators engaging in a similar crime. *Journal of interpersonal violence*. Available at <https://journals.sagepub.com/doi/pdf/10.1177/0886260520909186> [accessed 12 August 2021].

Ørngreen, R. and Levinsen, K., 2017. Workshops as a Research Methodology. *Electronic Journal of E-Learning*, 15(1), pp. 70-81.

Oswald, M., Grace, J., Urwin, S. and Barnes, G.C., 2018. Algorithmic risk assessment policing models: lessons from the Durham HART model and 'Experimental' proportionality. *Information & Communications Technology Law*, 27(2), pp. 223-250.

Owens, T., 2007. Problem-based learning in higher education. Campbell, A. and Norton, L. (eds). *Learning, Teaching and Assessing in Higher Education*. Exeter: Learning Matters.

Oxford Dictionary, 2022., Vulnerability. Available at <https://www.oed.com/view/Entry/224871?redirectedFrom=vulnerability&> [accessed 5 May 2022].

Page, A.D., 2008. Judging Women and Defining Crime: Police Officers' Attitudes Toward Women and Rape. *Sociological Spectrum*, 28(4), pp. 389-411.

Parsons, S. and Sherwood, G., 2016. Vulnerability in custody: perceptions and practices of police officers and criminal justice professionals in meeting the communication needs of offenders with learning disabilities and learning difficulties. *Disability & Society*, 31(4), pp. 553-572.

Paterson, C., 2022. Victim-Oriented Police Reform: A Comparative Perspective. Jeglic, E. and Calkins, C., *Handbook of Issues in Criminal Justice Reform in the United States*. Cham, Switzerland: Springer, pp. 79-95.

Paterson, C. and Best, D., 2015. Policing Vulnerability through Building Community Connectors. *Policing*, 10(2), pp. 150–157.

Paterson, C. and Williams, A., 2018. Towards victim-oriented police? Some reflections on the concept and purpose of policing and their implications for victim-oriented police reform. *Journal of Victimology and Victim Justice*, 1(1), pp. 1-17.

Pease, K. and Roach, J., 2017. How to morph experience into evidence. Knutsson, J. and Tompson, L., *Advances in Evidence-Based Policing*. Abingdon: Routledge, pp. 84-97.

Pease, K., Ignatans, D. and Batty, L., 2018. Whatever happened to repeat victimisation?. *Crime Prevention and Community Safety*, 20(4), pp. 256-267.

Perloff, L.S., 1983. Perceptions of vulnerability to victimization. *Journal of Social Issues*, 39(2), pp. 41-61.

Phellas, C., Bloch, A. and Seale, C., 2012. Structured methods: interviews, questionnaires and observation. Seale, C., ed., *Researching Society and Culture*, 3rd edition. London: Sage.

Phillips, S.W. and Sobol, J.J., 2012. Police decision making: an examination of conflicting theories. *Policing: An International Journal of Police Strategies & Management*, 35(3), pp. 551-565.

Platt, D. and Turney, D., 2014. Making threshold decisions in child protection: A conceptual analysis. *British Journal of Social Work*, 44(6), pp. 1472-1490.

Plummer, M. and Cossins, A., 2018. The cycle of abuse: When victims become offenders. *Trauma, Violence, & Abuse*, 19(3), pp. 286-304.

Police.uk, 2022. Contact the police. Available at: <https://www.police.uk/pu/contact-the-police/> [accessed 5 May 2022].

Public Health England, 2014. Mental Health System Profiling Tools User Guide [online: profiling guide]. Available from: <https://fingertips.phe.org.uk/profile-group/mental-health/profile/common-mental-disorders> [Accessed 21 November 2018].

Punch, M and Naylor, T., 1973. The police: a social service. *New Society*, 24(554), pp. 358-361.

Puntis, S., Perfect, D., Kirubarajan, A., Bolton, S., Davies, F., Hayes, A., Harriss, E. and Molodynski, A., 2018. A systematic review of co-responder models of police mental health 'street' triage. *BMC psychiatry*, 18(1), [open access]: available at <https://bmcp psychiatry.biomedcentral.com/articles/10.1186/s12888-018-1836-2> [accessed 28 March 2022].

Purvin, D.M., 2007. At the crossroads and in the crosshairs: Social welfare policy and low-income women's vulnerability to domestic violence. *Social Problems*, 54(2), pp. 188-210.

Quarmby, N. and Young, L.J., 2010. *Managing Intelligence: The Art of Influence*. Sydney: Federation Press.

Rader, N.E. and Cossman, J.S., 2011. Gender Differences in U.S. College Students' Fear of Others. *Sex Roles: A Journal of Research*, 64(7), pp. 568–581.

Rader, N.E., Cossman, J.S. and Porter, J.R., 2012. Fear of crime and vulnerability: Using a national sample of Americans to examine two competing paradigms. *Journal of Criminal Justice*, 40(2), pp. 134-141.

Rahtz, H., 2016. *Race, Riots, and the Police*. Boulder, CO, USA: Lynne Rienner Publishers.

Raine, J.W. and Keasey, P., 2012. From Police Authorities to Police and Crime Commissioners: Might policing become more publicly accountable?. *International Journal of Emergency Services*, 1(2), pp. 122-134.

Ramshaw, P. and Soppitt, S., 2018. Educating the recruited and recruiting the educated: Can the new police education qualifications framework in England and Wales succeed where others have faltered. *International Journal of Police Science & Management*, 20(4), pp. 243-250.

Ratcliffe, J., 2021. Policing and public health calls for service in Philadelphia. *Crime science*, 10(1), pp. 1-6. [Open access]. Available at <https://link.springer.com/article/10.1186/s40163-021-00141-0> [accessed 3 June 2021].

Ratcliffe, J., 2019. *Reducing Crime: A Companion for Police Leaders*. Abingdon: Routledge.

Ratcliffe, J., 2016. *Intelligence-Led Policing*. Abingdon: Routledge.

Ratcliffe, J., 2015. Towards an index for harm-focused policing. *Policing: A Journal of Policy and Practice*, 9(2), pp. 164-182.

Ratcliffe, J., 2002. Aoristic signatures and the spatio-temporal analysis of high volume crime patterns. *Journal of Quantitative Criminology*, 18(1), pp. 23-43.

Ratcliffe, J., 2000. Aoristic analysis: the spatial interpretation of unspecific temporal events. *International Journal of Geographical Information Science*, 14(7), pp. 669-679.

Rees, D.G., 1995. *Essential Statistics*, 3rd edition. London: Chapman and Hall.

Reiner, R., 2010. *The Politics of the Police*. Oxford: Oxford University Press.

Richie, J. and Lewis, J., eds., 2003. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. London: Sage.

Rittel, H.W.J., and Webber, M., 1973. *Dilemmas in a general theory of planning*. *Policy Sciences*, 4(2), pp. 155–169.

Rivas, C., 2012. Coding and analysing qualitative data. Seale, C., ed., *Researching Society and Culture*, 3rd edition. London: Sage.

Robinson, G., McLean, R. and Densley, J., 2019. Working county lines: child criminal exploitation and illicit drug dealing in Glasgow and Merseyside. *International Journal of Offender Therapy and Comparative Criminology*, 63(5), pp. 694-711.

Rock, D.J., Judd, K. and Hallmayer, J.F., 2008. The seasonal relationship between assault and homicide in England and Wales. *Injury*, 39(9), pp. 1047-1053.

Rogers, A.C., 1997. Vulnerability, health and health care. *Journal of Advanced Nursing*, 26(1), pp. 65-72.

Rogers, C. and Coliandris, G., 2015. Seeing Vulnerability. *Police Professional*, 471: 03 September 2015. Aylesbury: Verdant Media.

Rogers, C. and Lewis, R., eds., 2007. *Introduction to Police Work*. Willian: Cullompton.

Rogers, C. and Scally, E.J., 2018. Police use of technology: Insights from the literature. *International Journal of Emergency Services*, 7(2), pp. 100-110.

Rogerson, P., 1995. Performance measurement and policing: Police service or law enforcement agency?. *Public Money & Management*, 15(4), pp. 25-30.

Roulstone, A., Thomas, P. and Balderston, S., 2011. Between hate and vulnerability: unpacking the British criminal justice system's construction of disablism hate crime. *Disability and Society*, 26(3), pp. 351-364.

Rowe, M. ed., 2013. *Policing Beyond Macpherson*. Abingdon: Routledge.

Salmon, G., 2004. Multi-agency collaboration: the challenges for CAMHS. *Child and Adolescent Mental Health*, 9(4), pp. 156-161.

Sandall, D., Angel, C.M. and White, J., 2018. 'Victim-offenders': A third category in police targeting of harm reduction. *Cambridge Journal of Evidence-Based Policing*, 2(3), pp. 95-110.

Sanders, A. and Young, R., 2012. Police powers. Newburn, T., ed., *Handbook of Policing*, 2nd edition, Abingdon: Taylor and Francis, pp. 309-340.

Santos, R.B., 2015. Routine activity theory: a cornerstone of police crime analysis work. Andresen, M. and Farrell, G. eds., *The Criminal Act: The Role and Influence of Routine Activity Theory*. Basingstoke: Palgrave Macmillan.

Santos, R.B., 2014. The Effectiveness of Crime Analysis for Crime Reduction: Cure of Diagnosis? *Journal of Contemporary Criminal Justice*, 30(2), pp. 147–168.

Saxton, M.D., Jaffe, P.G., Dawson, M., Olszowy, L. and Straatman, A.L., 2020. Barriers to police addressing risk to children exposed to domestic violence. *Child Abuse & Neglect*, 106, p. 104554.

Schermuly, A.C., 2019. Urbanisation, Vulnerability and Police Legitimacy. Forbes-Mewett, H., ed., *Vulnerability in a Mobile World*. Emerald Publishing Limited, pp. 47-69.

Schroeder, D. and Gefenas, E., 2009. Vulnerability: too vague and too broad?. *Cambridge Quarterly of Healthcare Ethics*, 18, p. 113-121.

Schuller, N., 2013. Is crime a question of health? *Safer Communities*, 12(2), pp. 86-96.

Schultz, L.G., 1968. The victim-offender relationship. *Crime and Delinquency*, 14(2), pp. 135-141.

Scott, M. and Clarke, R., 2020. *Problem-Oriented Policing: Successful Case Studies*. Oxon: Routledge.

Seale, C., 2012a. Generating grounded theory. Seale, C., ed., *Researching Society and Culture*, 3rd edition. London: Sage.

Seale, C., 2012b. Preparing data for statistical analysis. Seale, C., ed., *Researching Society and Culture*, 3rd edition. London: Sage.

Seale, C., 2012c. Statistical reasoning: causal arguments and multivariate analysis. Seale, C., ed., *Researching Society and Culture*, 3rd edition. London: Sage.

Serie, C.M., Krumeich, A., van Dijke, A., de Ruiter, E., Terpstra, L. and de Ruiter, C., 2018. Sex traffickers' views: a qualitative study into their perceptions of the victim-offender relationship. *Journal of Human Trafficking*, 4(2), pp. 169-184.

Sewel, K., 2010. Language matters: 'Changing language, changing policy and practice': Use of language in child abuse & exploitation work. Available at https://www.plymouthonlinedirectory.com/media/2824/Barnardo-s-Language-Matters-Presentation/pdf/Barnardos_Language_Matters_Presentation.pdf?m=637426713393030000 [accessed 10 June 2022].

Shane, J.M., 2010. Performance management in police agencies: a conceptual framework. *Policing: An International Journal*, 33(1), pp. 6-29.

Shannon, I., 2021. *Chief Police Officers' Stories of Legitimacy: Power, Protection, Consent and Control*. Cham, Switzerland: Springer Nature.

Shapiro, G.K., Cusi, A., Kirst, M., O'Campo, P., Nakhost, A. and Stergiopoulos, V., 2015. Co-responding police-mental health programs: A review. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), pp. 606-620.

Shapland, J. and Hall, M., 2007. What do we know about the effects of crime on victims?. *International Review of Victimology*, 14(2), pp. 175-217.

Shaw, M. and Chenery, S., 2007. Kings and castles, cavemen and caves: The impact of crime on male victims. In Farrell, G., Bowers, K., Johnson, S. and

Townsley, M., *Imagination for Crime Prevention: Essays in Honour of Ken Pease*. Crime Prevention Studies, 21. Cullompton: Willan, pp. 147-161.

Sherman, L. and Cambridge University associates, 2020. How to Count Crime: the Cambridge Harm Index Consensus. *Cambridge Journal of Evidence-Based Policing*, 4, pp. 1-14.

Sherman, L. and Eck, J.E., 2003. Policing for crime prevention. In Farrington, D, MacKenzie, D., Sherman, L. and Welsh, B., *Evidence-Based Crime Prevention*. London: Routledge.

Sherman, L., 2020. How to Count Crime: the Cambridge Harm Index Consensus. *Cambridge Journal of Evidence-Based Policing*, 4(1), pp. 1-14.

Sherman, L., 2019. Targeting, testing, and tracking: the Cambridge assignment management system of evidence based police assignment. *Mitchell, R. and Huey, L., Evidence Based Policing: An Introduction*. Bristol: Policy Press.

Sherman, L., 2013. The rise of evidence-based policing: Targeting, testing, and tracking. *Crime and Justice*, 42(1), pp. 377-451.

Sherman, L., 2007. The power few: experimental criminology and the reduction of harm. *Journal of Experimental Criminology*, 3(4), pp. 299-321.

Sherman, L., 1998. *Evidence-Based Policing*. Washington, DC: Police Foundation.

Sherman, L., 1998b. *Preventing crime: What works, what doesn't, what's promising*. US Department of Justice, Office of Justice Programs, National Institute of Justice.

Sherman, L., Neyroud, P.W. and Neyroud, E., 2016. The Cambridge crime harm index: Measuring total harm from crime based on sentencing guidelines. *Policing: A Journal of Policy and Practice*, 10(3), pp. 171-183.

Shoham, S.G., Knepper, P. and Kett, M. eds., 2010. *International Handbook of Victimology*. Abingdon: Routledge.

Shorrocks, S., McManus, M.A. and Kirby, S., 2020. Profile of repeat victimisation within multi-agency referrals. *International Review of Victimology*, 26(3), pp. 332-343.

Shorrocks, S., McManus, M.M. and Kirby, S., 2019a. Practitioner perspectives of multi-agency safeguarding hubs (MASH). *The Journal of Adult Protection*, 12(1), pp. 9-20.

Shorrocks, S., McManus, M.A. and Kirby, S., 2019b. Investigating the characteristics of vulnerable referrals made to a multi-agency safeguarding hub. *Policing: A Journal of Policy and Practice*, 13(2), pp. 201-212.

Sidebottom, A., Bullock, K., Armitage, R., Ashby, M., Clemmow, C., Kirby, S., Laycock, G. and Tilley, N., 2020a. *Problem-Oriented Policing in England and Wales 2019*.

Sidebottom, A., Bullock, K., Ashby, M., Kirby, S., Armitage, R., Laycock, G. and Tilley, N., 2020b. *Successful Police Problem-Solving: A Practice Guide*.

Sidebottom, A., Kirby, S., Tilley, N., Armitage, R., Ashby, M., Bullock, K. and Laycock, G., 2020c. *Implementing and Sustaining Problem-Oriented Policing: A Guide*.

Silver, E., Felson, R.B. and Vaneseltine, M., 2008. The relationship between mental health problems and violence among criminal offenders. *Criminal Justice and Behavior*, 35(4), pp. 405-426.

Silverman, D., 2017. *Doing Qualitative Research*, 5th Ed. London: Sage.

Simmhan, Y.L., Plale, B. and Gannon, D., 2005. *A survey of data provenance techniques*. Technical Report IUB-CS-TR618. Computer Science Department, Indiana University, Bloomington, IN, USA.

Simmons, J., Legg, C. and Hosking, R., 2003. National Crime Recording Standard (NCRS): an analysis of the impact on recorded crime. Online Report 31/03. Available

at <http://image.guardian.co.uk/sys-files/Guardian/documents/2003/07/17/NCRS1.pdf> [accessed 10 February 2022].

Simpson, R., 2021. Calling the police: Dispatchers as important interpreters and manufacturers of calls for service data. *Policing: A Journal of Policy and Practice*, 15(2), pp. 1537-1545.

Sincero, S.M., 2019. Ecological Systems Theory. Available at <http://www.environment.gen.tr/ecological-systems-theory/844-ecological-systems-theory.pdf> [accessed 17 January 2022].

Siporin, M., 1980. Ecological systems theory in social work. *Journal of Sociology and Social Welfare*, 7, pp. 507-532.

Skinner, J., Salway, S., Turner, D., Carter, L., Mir, G., Bostan, B. and Ellison, G., 2013. Aligning JSNA and EDS: benefits for minority ethnic communities?. *Journal of Integrated Care*, 12(2), pp. 77-90.

Skogan, W., 1996. Quoted in Brady, T., Measuring what matters: Part 1: Measures of crime, fear and disorder. National Institute of Justice: Research in Action. Washington: Department of Justice. December 1996. Available at <https://www.ojp.gov/pdffiles/measure.pdf> [accessed 10 June 2021].

Skogan, W.G., 1977. Dimensions of the dark figure of unreported crime. *Crime & Delinquency*, 23(1), pp. 41-50.

Slater, T., 2018. The invention of the 'sink estate': Consequential categorisation and the UK housing crisis. *The Sociological Review*, 66(4), pp. 877-897.

Smith, J. and Noble, H., 2014. Bias in research. *Evidence-Based Nursing*, 17(4), pp. 100-101.

Smith, M.J., and Tilley, N., eds., 2005. *Crime Science: New Approaches to Preventing and Detecting Crime*. Cullompton: Willan.

Smith, R., 2016. Policing in austerity: time to go lean? *International Journal of Emergency Services*, 5(2), pp. 174-183.

Smith, W.R. and Torstensson, M., 1997. Gender differences in risk perception and neutralizing fear of crime: Toward resolving the paradoxes. *The British Journal of Criminology*, 37(4), pp. 608-634.

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

Sparks, R.F., Genn, H.G. and Dodd, D.J., 1977. *Surveying Victims: A Study of the Measurement of Criminal Victimization, Perceptions of Crime, and Attitudes to Criminal Justice*. New York: Wiley.

Sparrow, M.K., 2018. Problem-oriented policing: matching the science to the art. *Crime Science*, 7(1). Open Access. Available at: <https://crimesciencejournal.biomedcentral.com/articles/10.1186/s40163-018-0088-2> [accessed 5 September 2020].

Sparrow, M.K., 2016. *Handcuffed: What Holds Policing Back, and the Keys to Reform*. Washington, D.C.: Brookings Institution Press.

Sparrow, M.K., 2008. *The Character of Harms: Operational Challenges in Control*. Cambridge; Cambridge University Press.

Sparrow, M.K., 1991. The application of network analysis to criminal intelligence: An assessment of the prospects. *Social Networks*, 13(3), pp. 251-274.

Spicer, J., Moyle, L. and Coomber, R., 2019. The variable and evolving nature of 'cuckooing' as a form of criminal exploitation in street level drug markets. *Trends in Organized Crime*, 23, pp. 301-323.

Spicer, N., 2012. Combining qualitative and quantitative methods. Seale, C. ed., *Researching Society and Culture*, 3rd edition. London: Sage.

Stafford, A.B., 2016. What matters to the public when they call the police? Insights from a call centre. *Policing and Society*, 26(4), pp. 375-392.

Staniforth, R.A., Jennings, U., Henderson, J. and Mitchell, S., 2019. Using multi-agency, multi-professional collaboration to reduce serious violence and organized crime. *Journal of Community Safety and Well-Being*, 4(3), pp. 63-65.

Stanko, B., 2008. Strategic intelligence: Methodologies for understanding what police services already "know" to reduce harm. Harfield, C., MacVean, A., Grieve, J.G.D. and Phillips, D., eds., *The Handbook of Intelligent Policing: Consilience, Crime Control, and Community Safety*. Oxford: Oxford University Press.

Stark, E., 2012. Looking beyond domestic violence: Policing coercive control. *Journal of Police Crisis Negotiations*, 12(2), pp. 199-217.

Stark, E. and Hester, M., 2019. Coercive control: Update and review. *Violence Against Women*, 25(1), pp. 81-104.

Statista, 2022. Crime rate per 1,000 population in the United Kingdom from 2002/03 to 2020/21. Available at <https://www.statista.com/statistics/1030625/crime-rate-uk/> [accessed 22 February 2022].

Stevens, A. and Gillam, S., 1998. Needs assessment: from theory to practice. *The BMJ*, 316 (7142), pp. 1448-1452.

Stevens, M., Norrie, C., Manthorpe, J., Hussein, S., Moriarty, J. and Graham, K., 2016. Models of Adult Safeguarding in England: Findings from a Study of Costs and Referral Outcomes. *British Journal of Social Work*, 47(4), pp. 1224–1244.

Stewart, D. and Shamdasani, P., 2015. *Focus Groups: Theory and Practice*, 3rd edition. Los Angeles: Sage.

Stone, N., 2018. Child criminal exploitation: 'County Lines', trafficking and cuckooing. *Youth Justice*, 18(3), pp. 285-293.

Strickland, P., 2013. "Clare's law": the Domestic Violence Disclosure Scheme. Available at: <https://researchbriefings.files.parliament.uk/documents/SN06250/SN06250.pdf> [accessed on 20th March 2019].

Stroebe, M., Schut, H. and Stroebe, W., 2007. Health outcomes of bereavement. *The Lancet*, 370(9603), pp. 1960-1973.

Stuckler, D., Reeves, A., Loopstra, R., Karanikolos, M. and McKee, M., 2017. Austerity and health: the impact in the UK and Europe. *European Journal of Public Health*, 27(4), pp. 18-21.

Sun, I.Y., Payne, B.K. and Wu, Y., 2008. The impact of situational factors, officer characteristics, and neighborhood context on police behavior: A multilevel analysis. *Journal of Criminal Justice*, 36(1), pp. 22-32.

Sutton-Vane, A., 2022. Debate: The preservation of police force records for future research—Why it is important, what is failing and lessons that can be learned. *Public Money & Management*, 42(1), pp. 8-9.

Tan, W.C., 2004. Research problems in data provenance. *IEEE Data Engineering Bulletin*, 27(4), pp. 45-52. Available at <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.87.6963&rep=rep1&type=pdf> [accessed 4 May 2022].

Tankebe, J., 2014. Police legitimacy. Reisig, M.D. and Kane, R.J. eds., *The Oxford Handbook of Police and Policing*. Oxford: Oxford University Press, pp. 238-259.

Tariq, S. and Woodman, J., 2013. Using mixed methods in health research. *Journal of Royal Society of Medicine*, 4(6), pp. 1-8. Available at <https://journals.sagepub.com/doi/pdf/10.1177/2042533313479197> [accessed 12 June 2019].

Tate, M.L., 2009. Workshops. *The Learning Professional*, 30(1), pp. 44-46.

Taylor, C. and White, S., 2000. *Practicing Reflexivity in Health & Welfare: Making Knowledge*. Buckingham: Open University Press.

Taylor, R.W. and Russell, A.L., 2012. The failure of police 'fusion' centers and the concept of a national intelligence sharing plan. *Police Practice and Research*, 13(2), pp. 184-200.

The Marmot Review, 2010. *Fair Society, Healthy Lives: The Marmot Review. Strategic Review of Health Inequalities in England post-2010*. Available at: <https://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-full-report-pdf.pdf> [accessed 10 June 2019].

Thomas, R., 1996. Statistics as Organizational Products. *Sociological Research Online*, 1(3). Available at <https://journals.sagepub.com/doi/full/10.5153/sro.36> [accessed 16 July 2019].

Thomas, S.D., 2021. Public health and its interface with police practice in the 21st century. Birch, P., Kennedy, M. and Kruger, E. eds., *Australian Policing: Critical Issues in 21st Century Police Practice*. Abingdon: Routledge.

Tierney, J., 2010. *Criminology: Theory and Context*, 3rd edition. Harlow: Pearson Education Ltd.

Toch, H., 2008. Police officers as change agents in police reform. *Policing & Society*, 18(1), pp. 60-71.

Tomlinson, P., Hewitt, S. and Blackshaw, N., 2013. Joining up health and planning: how Joint Strategic Needs Assessment (JSNA) can inform health and wellbeing strategies and spatial planning. *Perspectives in Public Health*, 133(5), pp. 254-262.

Tonkiss, F., 2012. Focus groups. Seale, C., ed., *Researching Society and Culture*, 3rd edition. London: Sage.

Towers, J. (2018). Statistical Challenges of Administrative and transaction data: Contribution to Discussion. *Journal of the Royal Statistical Society. Series A: Statistics in Society*, 181(3), 555-605.

Towers, S., Chen, S., Malik, A., and Ebert, D., 2018. Factors influencing temporal patterns in crime in a large American city: A predictive analytics perspective. *PLoS One*, 13(10), e0205151, available at: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0205151> [accessed 27 August 2021].

Trickett, A., Osborn, D.R., Seymour, J. and Pease, K., 1992. What is different about high crime areas?. *The British Journal of Criminology*, 32(1), pp. 81-89.

Trundle, C., Gibson, H. and Bell, L., 2019. Vulnerable articulations: The opportunities and challenges of illness and recovery. *Anthropology & Medicine*, 26(2), pp. 197-212.

Tseloni, A. and Duncan, E., 2022. Tools of the trade: crime, surveys and big data. Davies, P. and Rowe, M., eds., *An Introduction to Criminology*. London: Sage, pp. 57-75.

Tyler, T., 2004. Enhancing Police Legitimacy. *The Annals of the American Academy of Political and Social Science*, 593, pp. 84-99.

Uggen, C. and Wakefield, S., 2008. *Young Adults Reentering the Community from the Criminal Justice System: The Challenge of Becoming an Adult. On your own without a net*. University of Chicago Press, pp. 114-144.

Uittenbogaard, A. and Ceccato, V., 2012. Space-time clusters of crime in Stockholm, Sweden. *Review of European Studies*, 4(5), pp. 148-156.

Ullman, S.E. and Siegel, J.M., 1993. Victim-offender relationship and sexual assault. *Violence and victims*, 8(2), pp. 121-134.

Vainio, A., 2013. Beyond research ethics: Anonymity as 'ontology', 'analysis' and 'independence'. *Qualitative Research*, 13(6), pp. 685-698.

Vakhitova, Z., Webster, J., Alston-Knox, C., Reynald, D. and Townsley, M., 2018. Offender-victim relationship and offender motivation in the context of indirect cyber abuse: A mixed-method exploratory analysis. *International Review of Victimology*, 24(3), pp. 347-366.

van Dijk, A. and Crofts, N., 2017. Law enforcement and public health as an emerging field. *Policing and Society*, 27(3), pp. 261-275.

van Dijk, A, Herrington, V., Crofts, N., Breunig, R., Burris, S., Sullivan, H., Middleton, J., Sherman, S. and Thomson, N., 2019. Law enforcement and public health:

recognition and enhancement of joined-up solutions. *The Lancet*, 393(10168), pp. 287-294.

van Dijk, A. and Hoogewoning, F., 2015. *What Matters in Policing?: Change, Values and Leadership in Turbulent Times*. Bristol: Policy Press.

van Dijk, A., Hoogewoning, F. and Punch, M., 2016. Policing at a turning point: Implications for research. Brunger, M., Tong, S. and Martin, D., eds., *Introduction to Policing Research: Taking Lessons from Practice*. Abingdon: Routledge.

van Dijk, J.V. and Tseloni, A., 2012. Global overview: International trends in victimization and recorded crime. van Dijk, J., Tseloni, A. and Farrell, G., eds., *The International Crime Drop: New Directions in Research*. Basingstoke: Palgrave, pp. 11-36.

van Dijk, J., Tseloni, A. and Farrell, G., eds., 2012. *The International Crime Drop: New Directions in Research*. Basingstoke: Palgrave.

van Sleeuwen, S. E., Steenbeek, W., and Ruiter, S., 2021. When Do Offenders Commit Crime? An Analysis of Temporal Consistency in Individual Offending Patterns. *Journal of Quantitative Criminology*, 37, pp. 863-889.

Varano, S.P., Schafer, J.A., Cancino, J.M. and Swatt, M.L., 2009. Constructing crime: Neighborhood characteristics and police recording behavior. *Journal of Criminal Justice*, 37(6), pp. 553-563.

Vaswani, N. and Gillon, F., 2019. Bereavement and Offending Behaviours: A Role for Early and Effective Intervention (EEI)? Centre for Youth and Criminal Justice, University of Strathclyde. Available at: <https://www.cycj.org.uk/resource/bereavement-and-offending-behaviours-a-role-for-early-and-effective-intervention-eei/> [accessed 17 January 2022].

Vaswani, N., 2014. The ripples of death: Exploring the bereavement experiences and mental health of young men in custody. *The Howard Journal of Criminal Justice*, 53(4), pp. 341–359.

Venema, R.M., Lorenz, K. and Sweda, N., 2021. Unfounded, cleared, or cleared by exceptional means: Sexual assault case outcomes from 1999 to 2014. *Journal of Interpersonal Violence*, 36(19-20), pp. NP10688-NP10719.

Verdun-Jones, S.N. and Rossiter, K.R., 2010. The psychological impact of victimization: Mental health outcomes and psychological, legal, and restorative interventions. Shoham, S.G., Knepper, P. and Kett, M. eds., *International Handbook of Victimology*. Boca Raton, FL, USA: CRC Press, pp. 637-664.

Villacampa, C. and Torres, N., 2019. Human trafficking for criminal exploitation: Effects suffered by victims in their passage through the criminal justice system. *International Review of Victimology*, 25(1), pp. 3-18.

Vitale, A., 2017. *The End of Policing*. London: Verso Books.

Von Gunten, L., Hümbelin, O. and Fritschi, T., 2014. Administrative Data: Benefits and Challenges for Social Security Research. Illustrated by Research Projects at the Berne University of Applied Science, Social Work Division. Available at <https://ecpr.eu/Filestore/PaperProposal/c37024ae-ed80-4fc8-b8b2-0c22a14a648f.pdf> [Accessed 13 December 2020].

Vrees, R.A., 2017. Evaluation and management of female victims of sexual assault. *Obstetrical & Gynecological Survey*, 72(1), pp. 39-53.

Wager, N.M., 2015. Understanding Children's Non-disclosure of Child Sexual Assault: Implications for Assisting Parents and Teachers to Become Effective Guardians. *Safer Communities*, 14(1), pp. 16–26.

Wager, N.M., 2012. Psychogenic amnesia for childhood sexual abuse and risk for sexual revictimisation in both adolescence and adulthood. *Sex Education*, 12(3), pp. 331-49.

Walklate, S., 2016. Victims of crime. Corteen, K., Morley, S., Taylor, P. and Turner, J. eds., *A Companion to Crime, Harm and Victimisation*. Bristol: Policy Press, pp. 159-261.

Walklate, S., 2011. Reframing criminal victimization: Finding a place for vulnerability and resilience. *Theoretical Criminology*, 15(2), pp. 179-194.

Walklate, S., 2007. Perspectives on the Victim and Victimisation. Walklate, S., ed., *Handbook of Victims and Victimology*. London: Willan, pp. 11-16.

Walklate, S. ed., 2007b. *Handbook of Victims and Victimology*. Abingdon: Routledge.

Walklate, S., 2004. *Gender, Crime and Criminal Justice*, 2nd edition. Cullompton: Willan.

Walsh, D., 2012. Doing ethnography. Seale, C., ed., *Researching Society and Culture*, 3rd edition. London: Sage.

Walsh, J. and Mason, W., 2018. Walking the walk: changing familial forms, government policy and everyday social work practice in England. *Social Policy and Society*, 17(4), pp. 603-618.

Warner, B., and Pierce, G., 1993. Reexamining social disorganization theory using calls to the police as a measure of crime. *Criminology*, 31(4), pp. 493-517.

Wasik, M., 2006. Protecting vulnerable groups after Soham and Bichard: Is IT the solution, or part of the problem?. *International Review of Law Computers & Technology*, 20(1-2), pp. 7-19.

Watson, A.C. and Fulambarker, A.J., 2012. The crisis intervention team model of police response to mental health crises: a primer for mental health practitioners. *Best Practices in Mental Health*, 8(2), p. 71.

Weisburd, D., 2005. Hot Spots Policing Experiments and Criminal Justice Research: Lessons from the Field. *The Annals of the American Academy of Political and Social Science*, 599, pp. 220-245. Available at <http://www.jstor.org/stable/25046101> [accessed on 7 May 2021].

Wesiburd, D. and Braga, A., 2019. Hotspots policing as a model for police intervention. Weisburd, D. and Braga, A., eds. *Police Innovation*. Cambridge: Cambridge University Press, pp. 291-313.

Weisburd, D. and White, C., 2019. Hot spots of crime are not just hot spots of crime: Examining health outcomes at street segments. *Journal of Contemporary Criminal Justice*, 35(2), pp. 142-160.

Weisburd, D., Cave, B., Nelson, M., White, C., Haviland, A., Ready, J., Lawton, B. and Sikkema, K., 2018. Mean streets and mental health: Depression and post-traumatic stress disorder at crime hot spots. *American Journal of Community Psychology*, 61(3-4), pp. 285-295.

Wellman, B., 1988. Structural analysis: from method and metaphor to theory and substance. Wellman, B. and Berkowitz, S.D., *Social Structures: A Network Approach*. Cambridge: Cambridge University Press.

Wells, H., 2015. Grey areas and fine lines: negotiating operational independence in the era of the police and crime commissioner. *Safer Communities*, 14(4), pp. 193-202.

Wells, W. and Schafer, J.A., 2006. Officer perceptions of police responses to persons with a mental illness. *Policing: An International Journal of Police Strategies & Management*, 29(4), pp. 578-601.

White, C. and Weisburd, D., 2018. A co-responder model for policing mental health problems at crime hot spots: Findings from a pilot project. *Policing: A Journal of Policy and Practice*, 12(2), pp. 194-209.

White, R., and Haines, F., 2001. *Crime & Criminology: An Introduction*, 2nd edition. Oxford: Oxford University Press.

White, R., Haines, F. and Asquith, N.L., 2017. *Crime and Criminology*, 6th ed. Oxford: Oxford University Press.

White, V. and Robinson, S., 2014. Leading change in policing: police culture and the psychological contract. *The Police Journal*, 87(4), pp. 258-269.

Wikström, P.O.H., 2010. Explaining crime as moral actions. Hitlin, S. and Vasiey, S., eds., *Handbook of the Sociology of Morality*. New York, USA: Springer, pp. 211-239.

Wilcox, P. and Cullen, F.T., 2018. Situational opportunity theories of crime. *Annual Review of Criminology*, 1, pp. 123-148.

Williams, D.M., 1997. Vulnerable families: a study of health visitors' prioritization of their work. *Journal of Nursing Management*, 5, pp. 19–24.

Williams, E., Norman, J. and Barrow-Grint, K., 2020. Policing vulnerability: Attrition, rape and domestic abuse. Pepper, I. and McGrath, R., eds., *Introduction to Professional Policing*. Abingdon: Routledge, pp. 129-149.

Williams, E., Norman, J. and Rowe, M., 2019. The police education framework: a professional agenda or building professionals?. *Policing: A Journal of Practice and Research*, 20(3): pp. 259-272.

Williams, E., Norman, J. and Wunsch, D., 2009. Too little too late: Assessing vulnerability. *Policing: A Journal of Policy and Practice*, 3(4), pp. 355-363.

Wilson, J.Q. and Kelling, G.L., 1982. Broken Windows. *Atlantic Monthly*, 249(3), pp. 29-38.

Windle, J., Moyle, L. and Coomber, R., 2020. 'Vulnerable' Kids Going Country: Children and Young People's Involvement in County Lines Drug Dealing. *Youth Justice*, 20(1-2), pp. 64-78.

Winkel, F. W. and Denkers, A., 1995. Crime victims and their social network: a field study on the cognitive effects of victimisation, attributional responses, and the victim-blaming model. *International Review of Victimology*, 4(2), pp. 309–322.

Winkel, F.W., Blaauw, E., Sheridan, L. and Baldry, A.C., 2003. Repeat criminal victimization and vulnerability for coping failure: A prospective examination of a potential risk factor. *Psychology, Crime and Law*, 9(1), pp. 87-95.

Winston, W., 2016. *Microsoft Excel data analysis and business modeling*. Redmond, WA, USA: Microsoft press.

Winter, R., 2017. (Gender) and vulnerability: the case of intimate partner violence. Asquith, N.L., Bartkowiak-Théron, I., and Roberts, K., *Policing Encounters with Vulnerability*. Cham, Switzerland; Palgrave Macmillan, pp. 199-220.

Wood, D.A., 2020. Embedding learning and assessment within police practice: the opportunities and challenges arising from the introduction of the PEQF in England and Wales. *Policing: A Journal of Policy and Practice*, 14(2), pp. 374-382.

Wood, J., Sorg, E.T., Groff, E.R., Ratcliffe, J.H. and Taylor, C.J., 2014. Cops as treatment providers: Realities and ironies of police work in a foot patrol experiment. *Policing and Society*, 24(3), pp. 362-379.

Wood, J.D., 2020. Private policing and public health: a neglected relationship. *Journal of Contemporary Criminal Justice*, 36(1), pp. 19-38.

Wood, J.D. and Beierschmitt, L., 2014. Beyond police crisis intervention: Moving “upstream” to manage cases and places of behavioral health vulnerability. *International Journal of Law and Psychiatry*, 37(5), pp. 439-447.

Wood, J.D. and Watson, A.C., 2017. Improving police interventions during mental health-related encounters: past, present and future. *Policing and Society*, 27(3), pp. 289-299.

Wood, J.D., Watson, A.C. and Barber, C., 2021. What can we expect of police in the face of deficient mental health systems? Qualitative insights from Chicago police officers. *Journal of Psychiatric and Mental Health Nursing*, 28(1), pp. 28-42.

Wood, L.C., 2020. Child modern slavery, trafficking and health: a practical review of factors contributing to children’s vulnerability and the potential impacts of severe exploitation on health. *BMJ Paediatrics Open*, 4(1), e000327.

World Health Organization, 2002. *Active ageing: A policy framework* (No. WHO/NMH/NPH/02.8). World Health Organization [online]. Available from: <https://apps.who.int/iris/bitstream/handle/10665/67215/WHO?sequence=1> [accessed 5 November 2021].

Wrigley, A., 2015. An eliminativist approach to vulnerability. *Bioethics*, 29(7), pp. 478-487.

Wrigley, A. and Dawson, A., 2016. Vulnerability and marginalized populations. *Public Health Ethics: Cases Spanning the Globe*: pp. 203-240.

Wu, D.T., Moore, J.C., Bowen, D.A., Kollar, L.M.M., Mays, E.W., Simon, T.R. and Sumner, S.A., 2019. Proportion of violent injuries unreported to law enforcement. *JAMA Internal Medicine*, 179(1), pp. 111-112.

Yadon, N., 2022. "They Say We're Violent": The Multidimensionality of Race in Perceptions of Police Brutality and BLM. *Perspectives on Politics*, 20(4), pp. 1209-1225.

Yang, M., Chen, Z., Zhou, M., Liang, X., and Bai, Z., 2021. The Impact of COVID-19 on Crime: A Spatial Temporal Analysis in Chicago. *ISPRS International Journal of Geo-Information*, 10(3), 152. Available at: <https://www.mdpi.com/2220-9964/10/3/152> [accessed 16 October 2021].

York, J., 2006. Neighbourhood crime and anti-social behaviour: the Audit Commission report. *Safer Communities*, 5(4), pp. 17-23.

Zack, E.S., Kennedy, J. and Long, J.S., 2019. Can nonprobability samples be used for social science research? A cautionary tale. *Survey Research Methods*, 13(2), pp. 215-227.

References removed

The following references have been removed to maintain anonymity of the police force used in this thesis.

Removed a – The *police force* Strategic Assessment 2018-2021.

Removed b – Census data for the area that *the police force* covers.

Removed c – Details about *the police force* and budgets.

Removed d – PCC Police and Crime Plan 2016-21 for the area covered by the police force.

Removed e – PCC Police and Crime Plan 2021-25 for the area covered by *the police force*.

Removed f – Safeguarding boards, 2018 document for the area covered by *the police force*. This contains the Continuum of Need and Thresholds Guidance.

Appendices

Appendix 1: How the police define, identify and respond to vulnerability: Executive Summary Report to support operational policing.

Background

Policing is not simply about enforcing the law: police forces have routinely operated as a social service in managing complex problems involving vulnerable people and non-crime related incidents. But police forces have finite resources and therefore they need to prioritise what they deal with. Austerity measures led to years of decreasing budgets and shrinking resources, across all public sector agencies, further impacting on police resources. This has meant that police forces have had to consider new ways of tackling the growing demand on their services. Prioritising vulnerability has been regarded as one way of managing these demands and the pressures created by austerity.

The concept of vulnerability has become a more explicit part of Her Majesty's Inspectorate of Constabularies and Fire and Rescue Services (HMICFRS) inspection process. This adds to the significance of vulnerability being a key agenda item for police forces. However, the problem, dealing with vulnerable people, had not been clearly or consistently defined until 2020 when the College of Policing proposed (2020, p. 9): "a person is vulnerable if, as a result of their situation or circumstances, they are unable to take care of or protect themselves or others from harm or exploitation." Yet prior to this definition, police forces have proceeded to tackle the concept under the banner of 'supporting the most vulnerable'.

The literature argues that vulnerability is ubiquitous within policing and the criminal justice system. Despite problems of definition, vulnerability has become a trigger for special attention by the police. To consider someone as vulnerable is a prediction that the person so recorded has a higher-than-normal probability of some negative event or harm occurring. As police activity looks to target and safeguard the most vulnerable, the police also look to improve legitimacy, whilst aiming to reduce long-term demand on their own resources, and in doing so, meet the pressures from growing inspections. Therefore, the identification of vulnerability in a policing context

should provide the leverage for increased resources. But who is vulnerable in a policing context and how are vulnerable people recorded in police data?

Method

This report is based on a mixed methods design used for researching a PhD thesis. This used two methods: one was a qualitative tool collecting data from a focus group that involved police practitioners from a UK police force; the second was analysis of secondary data collected from the same UK police force. The mixed methods approach was adopted as a means of 'triangulating' qualitative and quantitative data. That is to say that it is the use of more than one approach to exploring a research question by examining a theme from different perspectives.

This research is timely and pertinent for police forces in England and Wales as there is a national drive to improve police education, training and critical thinking of future officers through the Police Education Qualification Framework (PEQF). Findings from this research can be used to influence the PEQF agenda with regards policing vulnerability and for forces looking to improve their responses to vulnerability.

Findings

The concept of vulnerability in a policing context is an essential one and vulnerability should be at the forefront of the policing agenda. It is hoped that findings from this research can help support further enhancements in how the police define, identify and respond to vulnerability.

The findings showed that police practitioners regarded vulnerability as confusing: vulnerability can be many things. Further, practitioners considered that there are a range of factors and attributes that can influence the prevalence of vulnerability, which is heavily influenced by situational context. It was also noted that repeat victimisation was a significant area of vulnerability and needs to be addressed more directly by the police.

Practitioners felt that existing guidance was ambiguous and there was a lack of evidence regarding 'what works' when dealing with vulnerable people. Additionally, working in partnership was a recurrent theme throughout the research, but

practitioners wanted to understand the remit of different organisations and how they can help. The research suggested that police forces should be focussed on the desired outcomes of dealing with vulnerability as opposed to concentrating on how the organisation manages vulnerability, which is reminiscent of Goldstein's original 1979 arguments about 'means' over 'ends' syndrome that reduced the focus of the policing mission.

Findings from the recorded data were mixed. Vulnerability is not consistently recorded across the different data sets. Measuring vulnerability is difficult and the data explored in the research suggest that recorded data is inconsistent and does not offer a unified measure of vulnerability. The use of the various police data sets could result in 'mixed messages' about who is vulnerable, which was confirmed by the focus group. This suggested an inconsistent approach to recording vulnerability and suggests limited knowledge on when to use vulnerable qualifiers (markers) on cases.

Analysis showed that males accounted for a higher percentage of victims, but female victims were proportionally and statistically more likely to be recorded as vulnerable, more so if they were victimised in a residential location and were the victim of violent or sexual crimes. Indeed, when examined as an odds ratio, it was found that victims were 4.8 times more likely to get a vulnerability qualifier if there was a domestic abuse qualifier present on the same case.

The recorded data suggested that the demand from vulnerable victims was consistent throughout the 7-day week, with temporal peaks around 3pm and between 7pm and 10pm. This is supported by wider literature on routine activities (Cohen and Felson, 1979). The key point was that vulnerable people were a consistent feature throughout the week and recorded vulnerability is linked to routine activities theory.

The Protecting Vulnerable People (PVP) recorded data was the most comprehensive data set. This research argues that the PVP data alone should be used as a measure of vulnerability. To do so, it must be more widely accessible to police practitioners. The PVP data also places a shared responsibility of a response on a

number of social care and health agencies as well as those engaged in safeguarding.

Finally, this research argued that recording vulnerability should be used as a predictor for future harm. With the identification of potential vulnerability there should be a requirement to question 'vulnerable to... what?'. This leads practitioners to then consider the potential harm and identifying vulnerability is a predictor to further harm. Therefore, those responding to vulnerable individuals should be considering a 'need for... something' (e.g., service) to mitigate the vulnerability. This will reduce the confusion identified by practitioners in the focus group and nudge policing towards appropriate partnership working. This adds to the earlier finding that terminology should match that of key partner agencies that have a primary function for dealing with vulnerable people. Therefore, police forces should consider the use of 'need' as opposed to 'vulnerable', which aligns with social care and health agencies.

Improving the police response to vulnerability

A result of conducting this research was the design of an ecological approach to vulnerability' (see page 195: figure 9.2: Ecological approach to layered vulnerability, also see Keay and Kirby, 2018). The operational use of the ecological approach to vulnerability helps construct the complexity of vulnerability in a manner that directs the collection of information and data and directs service provision beyond policing. The model helps deconstruct the complexity of vulnerability into tangible parts that can educate and support how police practitioners view vulnerability. That is not to say that vulnerability can be so readily simplified. However, for policing purposes it provides a structured approach to identifying vulnerability and explaining a range of related phenomena that can identify contextual points for intervention. The model acutely articulates the importance of context for encounters between the police and vulnerable people. The ecological approach to vulnerability can be used to satisfy the concerns expressed by practitioners about what and who is vulnerable.

Vulnerability is not a series of isolated categories, and the model depicts attributes of vulnerability within 'layers'. Some of these attributes are fields collected in recorded police data. The use of the model can be used to improve data collection processes and where wider information is required to make an assessment of vulnerability, e.g.,

the model could be a useful asset in MASH hubs when assessing what information is available or required. This demonstrates a clear operation use for this model that can help improve police practices regarding data collection and subsequent internal analysis. Further, this helps mitigate any potential skewing that may be the result of bias that practitioners may have, which has been noted in the research.

Recommendations for police practice

It has been argued that “vulnerability should inform policy development and professional practice” (Menichelli, 2021, p. 699). Arguably, the findings from this research complement the literature and fill gaps in research, whilst contributing to the evidence-base that can be used to inform practice regarding vulnerability. This has resulted in the following recommendations:

1. Recorded data offers some valuable insights into how the police record vulnerability. However, the structure of the data sets is varied and inconsistent. It recommended that police forces review IT systems and how the accessibility of recorded data can be enhanced for analysis and operational support for frontline staff.
2. There are decades of research that demonstrate the adverse impact crime, harm and anti-social behaviour can have on repeat victims. Findings have shown that there are varying degrees of repeat victimisation across the data sets yet repeat victimisation does not feature in discussions around vulnerability. Therefore, it is recommended that police forces prioritise victimisation and repeat victimisation as a key feature of any policy that targets vulnerability.
3. It is recommended that police education and training take account of who is vulnerable and that the ecological approach to vulnerability is incorporated into police training, policy and operational practice.
4. It is recommended that vulnerability should be used as a predictor for future harm. With the recording of vulnerability there should be a requirement to question ‘vulnerable to... what?’. This leads practitioners to then consider the potential harm from being vulnerable and what is required to mitigate such harm. Therefore, those responding to vulnerable individuals should be considering a ‘need for... something’ (e.g., service) to mitigate the

vulnerability. This will help reduce the confusion identified by practitioners and improve the policing response along with more cohesive partnership working

Police forces cannot provide a range of social care services that is often what those with complex needs require. However, as first responders to those in crisis, it is important that police forces are involved in discussions on supporting those individuals and helping direct them to the most appropriate service. This thesis offers an evidence-base to support an improved response to those with greatest need in local communities.

References

Christie, N., 1986. The ideal victim. Fattah, E.A., ed., *From Crime Policy to Victim Policy*. Palgrave Macmillan: London, pp. 17-30.

Cohen, L.E. and Felson, M., 1979. Social change and crime rate trends: A routine activity approach. *American Sociological Review*, pp. 588-608.

College of Policing, 2020. Recognising and responding to vulnerability related risks guidelines (Consultation paper). Available at <https://paas-s3-broker-prod-lon-6453d964-1d1a-432a-9260-5e0ba7d2fc51.s3.eu-west-2.amazonaws.com/s3fs-public/Recognising-responding-vulnerability-related-risks-guidelines.pdf> [accessed 1 June 2021].

Goldstein, H., 1979. Improving Policing: A Problem oriented Approach. *Crime and Delinquency*, 25(2), pp. 236–258.

Keay, S. and Kirby, S., 2018. Defining Vulnerability: From the Conceptual to the Operational. *Policing: A Journal of Policy and Practice*, 12(4), pp. 428–438.

Menichelli, F., 2021. Governing through vulnerability in austerity England. *European Journal of Criminology*, 18(5), pp. 695-712.

Appendix 2: Focus Group Comments table

The table presented here displays a summary of key points raised by police practitioners.

Question	Summary of key themes	Quotes
What is Vulnerability?	It is unclear as there are changing circumstances. It is dependent upon the context of the situation in which there are many factors. Vulnerability is laden with connotations and is too much of a subjective term to warrant any significant direction for policing.	<p>“How someone feels at the time.”</p> <p>“Anyone can be vulnerable depending on changing circumstance.”</p> <p>“Being at a disadvantage to peers.”</p> <p>“Lack of capability to deal with your situation.”</p>
Who is vulnerable?	Everyone can be vulnerable at any point of their life. Certain groups are more prone to vulnerability than others: such as those with mental health issues, children, people with low self-esteem, people with dependency (alcohol or drugs), and those from different cultures.	<p>“Everyone. Anyone can be.”</p> <p>“Different types of vulnerability affect people differently.”</p> <p>“Those with a factor that impairs their ability to identify risk or threat, e.g. those with mental health issues.”</p> <p>“People with low self-esteem.”</p>
Why should we police vulnerability?	Protecting the public from harm, keeping the public safe, preventing crisis and because it is the police core business. However, some participants challenged whether this was perhaps mainly a role for other services.	<p>“To prevent it and improve outcomes for everyone.”</p> <p>“Prevent a cycle of problems.”</p> <p>“As part of collaborative working.”</p> <p>“Because it is core business.”</p> <p>“We shouldn’t always police it.”</p>
How should the police do it?	Vulnerability cuts across all public services and agencies must work in partnership to tackle issues. There is a tendency to work in silos and that this hampered any joined up action across public service agents.	<p>“Stop working in silos and work in partnership with other agencies.”</p> <p>“Use of neighbourhood policing teams to support communities.”</p> <p>“Flag up to appropriate services.”</p> <p>“By building self-resilience.”</p>
What evidence-base do we need?	There needs to be a consensus as to what vulnerability is and whose role it is to respond to a defined vulnerability. There needs to be a collective understanding of what the issues are surrounding the vulnerability.	<p>“Agree on what vulnerability is.”</p> <p>“Clear aims to establish a reliable measure.”</p> <p>“What works: what interventions have the greatest impact.”</p> <p>“Knowledge of what support is available.”</p> <p>“Collective understanding of what issues in a person’s life are.”</p>

Appendix 3: Code lists for quantitative data

Code lists for recorded crime data

Vulnerable SPSS	
1	Yes
2	No
99	missing

MH	
0	No
1	Yes
99	missing

Domestic SPSS	
1	Yes
2	No
99	missing

Repeat SPSS	
1	Yes
2	No
99	missing

Gender SPSS	
1	Male
2	Female
3	Business
99	Missing / unclassified

Ethnicity SPSS			
1	Asian	A1	Asian - Indian
		A2	Asian - Pakistani
		A3	Asian - Bangladeshi
		A9	Asian - Any Other Background
2	Black	B1	Black - Caribbean
		B2	Black - African
		B9	Black - Any other black background
3	Mixed	M1	Mixed - White and Black Caribbean
		M2	Mixed - White and Black African
		M3	Mixed - White and Asian
		M9	Mixed - Any other mixed background
4	Other	N1	Officer Urgently required elsewhere
		N2	Situation involving Public Disorder
		N3	Person does not understand
		N4	Person declines to define ethnicity
5	Chinese	O1	Chinese or other - Chinese
4	Other	O9	Any other Ethnic group
7	White	W1	White - British
		W2	White - Irish
		W9	White - Any other white background
8	Business	BU	Business
9	Victimless	VL	Victimless
99	Not known	NS	Not known

HOC Group SPSS (Home Office Classification)	
1	Criminal Damage and Arson
2	High Impact Acquisitive Crime
3	Other Acquisitive Offence
4	Other Crimes against Society
5	Sexual offence
6	Vehicle Crime
7	Violence against the person

State SPSS	
1	Closed
2	Court disposal
3	Crime under active investigation
4	No further action
5	Police disposal

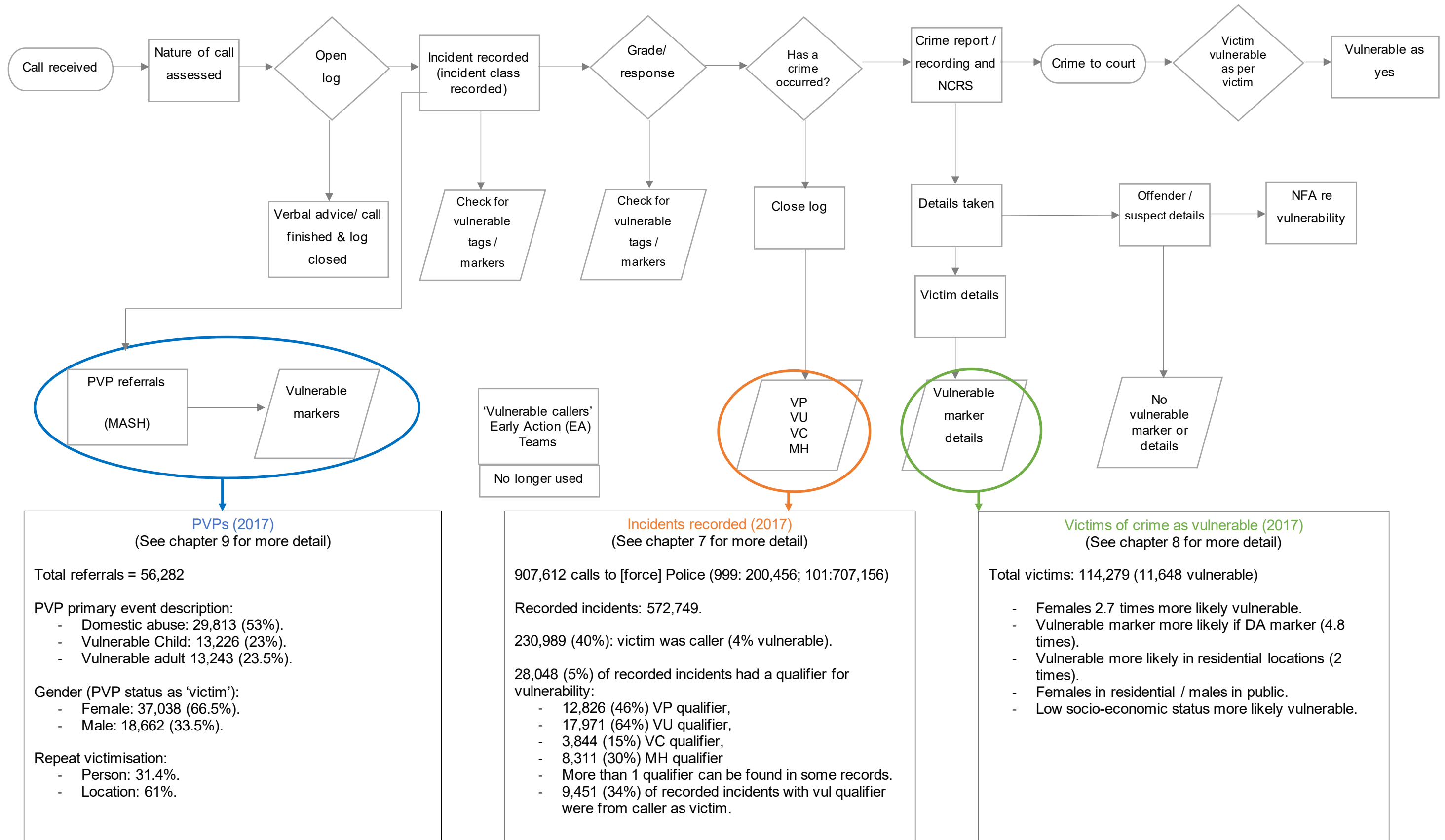
Outcome SPSS		
1	Caution	Adult Caution
		Adult Caution with Alternate Offence
2	Case closed	Case closed: No line of enquiry
		Case closed: Systems Thinking Principles Applied
3	Charged	Charge/Summonsed
		Charge/Summonsed with Alternate Offence
4	Community Resolution	Community Resolution
5	Evidential difficulties	Evidential difficulties named suspect identified
		Evidential difficulties victim based – named suspect identified
		Evidential difficulties victim based – named suspect not identified
6	Other	Formal action against the offender is not in the public interest (Police decision)
6	Other	Named suspect – further investigation not in public interest
0	Missing	NULL
6	Other	Other Agency Delegations
6	Other	Penalty Notice for Disorder (PND)
6	Other	Prosecution not in the public interest (CPS decision)
7	Prosecution prevented	Prosecution prevented – named suspect identified but is below the age of criminal responsibility
		Prosecution prevented – named suspect identified but is too ill (physical or mental health) to prosecute
		Prosecution prevented – named suspect identified but victim or key witness is dead or too ill to give evidence
6	Other	Prosecution time limit expired
		Taken into Consideration (TIC)
		The offender has died
		Youth Caution

Mosaic SPSS		
1	A	Country Living
2	B	Prestige Positions
3	C	City Prosperity
4	D	Domestic Success
5	E	Suburban Stability
6	F	Senior Security
7	G	Rural Reality
8	H	Aspiring Homemakers
9	I	Urban Cohesion
10	J	Rental Hubs
11	K	Modest Traditions
12	L	Transient Renters
13	M	Family Basics
14	N	Vintage Value
15	O	Municipal Challenge
99		Missing

Place SPSS	
1	Business
2	Care Home
3	Education
4	HMO
5	Hotel
6	Licensed Premises
7	Medical
8	Other
9	Public Place
10	Residential
99	Missing

Appendix 4: Flow chart showing process for data recording following a call for assistance by the police.

Figure A.4.1: Calls for service and police recorded data.



Appendix 5: PVP referral reason ID codes and description.

There were between one and eight referral reasons provided in the PVP referral cases. Referral reason 1 (RR1) was considered the primary reason for the referral. The totals are shown below.

Reason ID code	RR1	RR2	RR3	RR4	RR5	RR6	RR7	RR8	Totals	Reason
1	31,438								31438	Domestic Abuse
2	3,103	2,610							5713	Physical
3	2,368	724	130						3222	Neglect
4	2,786	608	135	9					3538	Sexual
5	62	70	9	4					145	Forced Marriage
6	56	178	58	15	5				312	Honour Based Abuse
7	63	24	7	3	1				98	Death
8	102	15	2						119	Channel
9	1,830	331	41	12	3				2217	MFH
10	712	903	157	15	6	1			1794	CSE
11	52	38	4	2	1	2			99	Trafficking/Slavery
12	414	178	63	17	6	1			679	Financial Abuse
13	16	5	3	3					27	FGM
14	29	64	60	1					154	Cyber Crime
15	276	171	38	3					488	Adult Care Home
16	51	493	50	10	3	1			608	External MARAC
17	645	124	76	15	2				862	CP Conference
18	27	376	41	16	4	2	1		467	Clare's Law
19	2,441	1,719	533	148	14	10	3	1	4869	Early Action
20	1,582	964	184	36	8	1			2775	Information Only
21	35	20	4	7	3				69	CSODS
Totals	48,088	9,615	1,595	316	56	18	4	1	59693	

RR = Referral reason

Appendix 6: Participant information and consent forms

Participant Information Sheet

****DATE****

Dear

I am a doctoral researcher with the University of Central Lancashire (UCLan). I am researching the policing response to vulnerability. The title of my research is: How do the police define, identify and respond to vulnerability?

I would like to invite you to participate in my research that aims to:

- Develop an evidence base that will improve how vulnerability is defined and identified,
- Develop an operational model that can improve the policing response towards vulnerable people.

Before you decide whether or not to take part, it is important for you to understand why the research is being conducted and what it will involve. Please take time to read the following information carefully.

Purpose of study

Vulnerability is a national and an international issue for policing. Emergency 999 calls have decreased by 23% since 2006/07, and this is mirrored by a reduction in recorded crime. However, overall there has been an increased demand on policing services and the Police Foundation (2016) report the landscape of policing is changing. This demand is increasing in the area of what previously have been hidden incidents, specifically involving vulnerable people. Dealing with vulnerability is a relatively new and complex matter for the police, who are often the first emergency service to be called for help. Policing vulnerability is an increasingly important yet ambiguous area of police work. This study will examine the concept of vulnerability, in particular the police service. It will develop and test a workable definition of vulnerability.

Participation

A number of police officers and police staff have been invited to participate. You have been chosen due to your role in dealing with vulnerability from a policing perspective.

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. If you do agree to take part, you can at any point refuse to answer any of the questions and can leave the interview or focus group at any time.

All data and comments obtained through the interview or focus group will be confidential and anonymised. It will not be possible to identify you through any of the resulting research or reporting. They will be retained securely in accordance with university guidelines.

Benefits of participation

There are no immediate benefits to you. However, the wider benefits will include the development of an operational model that will aim to improve service redesign through a better understanding of what vulnerability is and how the police should respond to it. Therefore, the research will aim to improve the policing response to callers for service, end-user service and

reduce police bureaucracy. This may have a direct impact on your role and improve working conditions, e.g., reducing duplication of reporting or improving your data collection process.

Research results

Findings, conclusions, and results from my research will be used in my final thesis for the award of a PhD. I will also write up a short report detailing key findings.

Participant Withdrawal

Any participant will be able to withdraw at any time prior to the actual interview or focus group taking place:

- Participants of interviews can withdraw up to 7 days after the interview by quoting their unique participant reference number. All of their data will be removed from the study and destroyed.
- Participants of focus groups will not be able to withdraw after the focus group has been conducted.

All participants will be informed of the process for withdrawing at the initial point of contact and immediately prior to the focus group / interview.

Research review and feedback

This research is funded by myself with support from the College of Policing. I am conducting this research primarily as a student of UCLan. I am also using my research for the benefit of UK policing in improving their understanding of, and response to, vulnerability.

My research has been approved by UCLan's University Research Ethics Committee that govern the school of Forensic & Applied Sciences.

Feedback will be provided through a written report that can be circulated amongst all participants and allow for further input and consultation before the project is written up.

Complaints and contact details

Any complaints or comments regarding my research, behaviour, the interviews or the focus groups can be made by contacting the ethics committee via OfficerForEthics@uclan.ac.uk.

My direct contact details are skeay@uclan.ac.uk and are included in the heading of this letter should you wish to contact me directly.

My supervisor and Director of Studies is Professor Stuart Kirby and he can be contacted via skirby1@uclan.ac.uk.

Thank you for taking the time to read this information sheet.

Scott Keay

Participant Consent Form

Study title: How do the police define, identify and respond to vulnerability?

Researcher: Scott Keay

By taking part in the study, you are agreeing that you understand the information provided and agree to the following:

- I confirm that I have read and have understood the Participant Information Sheet dated * for the above study. I have had the opportunity to consider the information, ask questions and have had these answered to my satisfaction.

- I understand that my involvement in the study will remain anonymous and once my responses have been submitted any identifiable information will be replaced with a code. (Please note if you wish to remove your data at any point you need to reference this unique code). Any detail that might identify me will not be included in any reports or publications produced from the study.

- I understand that I can decline to answer any question and may stop the interview / focus group at any point, without giving a reason.

- I agree to the interview / focus group being audio recorded.

- I agree to anonymised quotes being used within reports / other publications produced from the study.

- I understand there are limits to confidentiality. If I disclose information that highlights significant risk to myself or others this may be passed to relevant agencies to prevent that harm taking place.

Details for withdrawing from study.

Any participant will be able to withdraw at any time **prior** to the actual interview or focus group taking place. In addition:

- Participants of interviews can withdraw up to 7 days after the interview by quoting their unique participant ID (at the top of this form). All of their data will be removed from the study and destroyed.

- Participants of focus groups will not be able to withdraw after the focus group has been conducted.

Any adverse or unexpected issues may be managed or escalated through either PSD (Professional Standards Department), corporate media communications or through senior management.

Participant:

Signed:

Date:

Researcher:

Signed:

Date:

Director of Studies / Supervisor:

Signed:

Date:

1 copy to participant / 1 copy to researcher (for filing)