

The current role and contribution of ‘forensic clinical psychologists’ (FCPs) to criminal investigation in the United Kingdom

Tinna Dögg Sigurdardóttir, Adrian West and Gisli Hannes Gudjonsson

Abstract

Purpose – This study aims to examine the scope and contribution of Forensic Clinical Psychology (FCP) advice from the National Crime Agency (NCA) to criminal investigations in the UK to address the gap in current knowledge and research.

Design/methodology/approach – The 36 FCP reports reviewed were written between 2017 and 2021. They were analysed using Toulmin’s (1958) application of pertinent arguments to the evaluation process. The potential utility of the reports was analysed in terms of the advice provided.

Findings – Most of the reports involved murder and equivocal death. The reports focused primarily on understanding the offender’s psychopathology, actions, motivation and risk to self and others using a practitioner model of case study methodology. Out of the 539 claims, grounds were provided for 99% of the claims, 91% had designated modality, 62% of the claims were potentially verifiable and 57% of the claims were supported by a warrant and/or backing. Most of the reports provided either moderate or high insight into the offence/offender (92%) and potential for new leads (64%).

Practical implications – The advice provided relied heavily on extensive forensic clinical and investigative experience of offenders, guided by theory and research and was often performed under considerable time pressure. Flexibility, impartiality, rigour and resilience are essential prerequisites for this type of work.

Originality/value – To the best of the authors’ knowledge, this study is the first to systematically evaluate forensic clinical psychology reports from the NCA. It shows the pragmatic, dynamic and varied nature of FCP contributions to investigations and its potential utility.

Keywords Investigative advice, Offender profiling, Clinical forensic psychology, Toulmin’s framework, Utility

Paper type Research paper

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Received 5 July 2023
Revised 26 July 2023
1 September 2023
Accepted 1 September 2023

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Introduction

There is no single universally agreed definition of the term “offender profiling” (Fox *et al.*, 2020) [1]. Nevertheless, there is a general agreement that irrespective of the individual approach used, and it involves a process which draws on a behavioural knowledge base to assist police investigators in looking at evidence from a crime scene, including relevant witness statements, and “help identify key personality, behavioural, and demographic characteristics of an offender based on an analysis of the crimes that he or she has committed” (Fox and Farrington, 2018, pp. 3 and 28, citing Douglas *et al.*, 1986).

According to Fox *et al.* (2020), offender profiling is provided by police personnel, typically based on their investigative experience, investigative psychologists, academics and clinical consultants (e.g. forensic clinical psychologists [FCPs] or forensic psychiatrists). There are

several different approaches to the advice given to police in criminal investigations, often requiring different, but on occasions overlapping, skills and expertise (Wilson *et al.*, 1997; Muller, 2000). This includes *criminal investigation experience* (Douglas *et al.*, 1986), *behavioural investigative advice* (Rainbow and Gregory, 2011; Gregory and Rainbow, 2011; Knabe-Nicol *et al.*, 2011; Almond *et al.*, 2022), *forensic clinical psychology/psychiatry advice* (Brussel, 1968; Badcock, 1997; Boon, 1997; Gudjonsson and Copson, 1997; West, 2000; Alison *et al.*, 2004) and *geographic profiling advice* (Canter, 2003; Rossmo, 1997, 2000; Knabe-Nicol and Alison, 2011).

The principal purpose of the present study is to investigate in detail the reports and briefing notes of the FCP used by the UK National Crime Agency (NCA). A similar review has been previously conducted for behavioural investigative advisers (BIAs) (Alison *et al.*, 2003; Almond *et al.*, 2007, 2022), but knowledge about the specific role, methodology and advice from FCPs is mostly absent. The current study aims to address this gap in knowledge by providing a detailed analysis of 36 FCP reports, provided by the NCA for this research, using similar methodology used previously for the analysis of BIA reports (Almond *et al.*, 2007). A parallel study has been carried out for 77 NCA reports from BIAs during the same period (Sigurdardottir *et al.*, 2023).

In their article on “pragmatic psychology” and “offender profiling”, Alison *et al.* (2004) attempt to bridge the gap between the distinct contributions of academics and practitioners in providing investigative advice to police. Citing the work of Alison and Canter (1999), Alison *et al.* (2004) distinguishes between the two approaches by observing that practitioners focus primarily on the details of the case under investigation while academics attempt to understand general patterns and trends. The academic model focuses principally on statistical approaches related to investigative psychology, crime linkage analysis and geographic profiling (Fox *et al.*, 2020), which is unlikely to feature much in FCP reports.

The practitioner model relies on either, and in some cases both, investigative experience and forensic clinical experience, using a single case (individualized) methodology. Here, the focus is on understanding the offender’s background history, personality, criminal history, motivation and risk of re-offending and may involve either known or unknown offenders. The hypotheses formulated and investigative advice provided is based on scrutiny of the crime scene and other relevant available material. The knowledge and skills provided are grounded in extensive forensically based clinical work from a variety of settings (e.g. outpatient clinics, secure units, prison and expert witness work), which is combined with comprehensive knowledge of relevant theories and empirically based research (West, 2000).

There is a link between mental health and crime and clinical practitioners are best placed to provide experience-based knowledge and advice on this. The DSM-5 psychiatric disorders (American Psychiatric Association, 2013) that have been found to be associated with violence include substance-related and addictive disorders, bipolar 1 disorder, posttraumatic stress disorder, schizophrenia and other psychotic disorder, schizotypal personality disorder, antisocial personality disorder and borderline personality disorder (Harford *et al.*, 2018). Symptoms associated with these disorders that make them particularly dangerous include lack of empathy, manipulation, failure to accept responsibility for their actions, grandiose sense of self-worth, sense of entitlement, impulsivity and lack of remorse or guilt (Turvey, 2012). While violence in autism is rare, when it occurs, it can be extreme (Allely *et al.*, 2017).

The above taxonomy on mental disorders is often relevant to investigative advice and may also further the understanding of specific underlying psychopathology, such as psychopathy and sadism (Dhingra and Boduszek, 2013; Porter *et al.*, 2003; Woodworth *et al.*, 2013), anger/sadistic typology (Chai *et al.*, 2021), the link between childhood physical

abuse and sadistic traits (Cazala *et al.* (2023), distinction between instrumental and expressive aggression in cases of homicide (Meloy, 2006; Santtila *et al.*, 2003), motivational pattern of habitual sex offenders (Reid *et al.*, 2014), motivation involving acts of dismemberment in homicides (Pointon and Wright, 2023), sexually motivated murders (Schlesinger, 2007), face covering in homicide cases (Rainbow *et al.*, 2021) and overcontrolled hostility (Gudjonsson, 2018, pp. 153-155; Gudjonsson *et al.*, 1989, 1991). What is interesting about overcontrolled hostility is that in one study, it was predominantly found among convicted sex offenders (Gudjonsson *et al.*, 1989), suggesting that it is not confined to explosive homicide.

MacCulloch *et al.* (1995) provided an important early taxonomy for evaluating mentally disordered killers, focusing on three interrelated components: “internal” motivation, self-control and environment. They suggested that this taxonomy provides “a framework on to which existing categorical knowledge can be grafted and which will give further direction to the ongoing investigation of repeated attacks in the context psychopathology and offence category” (p. 56).

A recent systematic literature review has provided a comprehensive overview of similarities and differences in offending behaviours between acquaintance and stranger abductions (Jones *et al.*, 2023). There were six key findings:

1. there is a need for more research on abductor characteristics, including cross-cultural research;
2. non-familial abductors do not comprise a homogenous group;
3. most child abductions are perpetrated by men and are sexually motivated. In contrast, female abductors typically co-offend with a male accomplice;
4. some differences were found between the USA and the UK abduction offences;
5. abductions by multiple offenders typically involve sexual assault; and
6. there was an increased risk of murder among abducted children aged 6–13 and among perpetrators under the age of 29 years.

Relevant for the FCP's crime scene evaluation in homicide cases, while the rate of homicide has declined by about 5% in the UK over the past decade, the rate of serious mental illness (mainly schizophrenia and other delusional disorders) has proportionately increased (i.e. from approximately 5% to 8%) (Flynn *et al.*, 2021). This shows the complexity of problems and needs of people with major mental illness, including comorbid conditions (e.g. substance misuse). About one-third of the mentally disordered offenders in the study were not in contact with mental health services at the time of the homicide, suggesting untreated mental illness (Flynn *et al.*, 2021). Flynn and colleagues showed that despite the falling homicide rate, there is a worrying trend of increased use of knives in violent crimes (i.e. a 7% increase over the past one decade), which the authors viewed as a major public health concern. The FCPs, BIAs, NCA management and senior investigative officers (SIOs) need to be vigilant to these kinds of trends over time to optimize the fight against serious and organized crime.

The current study

In the UK, advice to criminal investigations is currently overseen by the NCA, who uses BIAs, FCP and a geographical profiler. The three types of advisers, along with advisers working in other areas within the agency, will in the future be led and managed by a newly established Behavioural and Social Science (BaSS) capability development. BaSS is overall governed by the NCA Science, Technology and Innovation Section. The comprehensive evaluation of FCP reports is, therefore, timely and important for the future development of

FCP work and contributions to criminal investigations in the UK. It complements a parallel study evaluating 77 BIAs reports ([Sigurdardottir et al., 2023](#)). Inherently, the work of the clinical forensic practitioner is more focused on understanding psychopathology than that of the BIAs, where the focus is heavily on descriptions drawn from the crime scene, research literature and databases. This is the first systematic study of FCP reports in police investigative setting in the UK.

The role of FCPs in criminal investigations is *multifaceted* (e.g. involving judgements and advice about human behaviour, criminogenic factors, mental health issues/disorders, offenders' potential risk to self and others, appropriate police interview strategy, hostage negotiations and sometimes direct interactions with suspects and witnesses). It typically involves *dynamic* factors (e.g. characterized by a rapidly changing situation or progress) and often requires *urgent* investigative advice.

The current basic requirement for FCP appointment within the NCA is clinical training at a doctoral level and significant experience in the assessment and treatment of offenders/patients in a forensic (e.g. secure unit/hospital) setting. Experience as a consultant in a Clinical Practice is also required, as well as Forensic and Clinical Psychology Chartership and Health Care Professions Council (HCPC) registration as Practitioner Psychologist in Clinical Psychology.

A summary of a current job description reads as follows: "The Forensic Clinical Psychologist will provide specialist support and advice to investigations that fall within the NCA agreed criteria for support to police forces and law enforcement agencies in the UK and overseas as it relates to serious and series crime, and other complex investigations including cross-border and high profile offences, which include sexually related murder, rapes, series sexual offences, abduction, serial arson, suspicious missing persons and no body murder investigations".

Any forensic clinical psychology advice to criminal investigations should be founded on the best available evidence and practice, the ground for each claim made (i.e. a clear description of the conditions on which a specific claim had been developed) should be provided in briefing notes or reports, and it is desirable that the supporting evidence for each of the grounds is substantiated (i.e. explicit support for the grounds), referred to in this article as backing. In addition, it is important that the modality (i.e. the strength of opinion) for each claim is articulated.

One way of investigating the compliance with the above requirements is to use [Toulmin's \(1958\)](#) application of pertinent arguments to perform a detailed analysis of the content of the claims and advice provided. It follows a similar methodology used by [Alison et al. \(2004\)](#) and [Almond et al. \(2007\)](#).

The current study of FCP reports is exploratory. It has four main aims as follows:

1. To describe the type of crime under investigation.
2. To identify the terms of reference and range of issues addressed in the reports (e.g. offender characteristics, behavioural analysis of the crime scene, linking of crimes, interview strategy, risk assessment and media advice).
3. To ascertain the nature of the grounds and backing provided for the individual claims in the reports.
4. The type of the investigative advice provided and its overall judged utility.

Method

The reports

Thirty-six FCP reports were provided by the NCA for evaluation. Only ten (27.8%) of the FCP reports were presented as full reports with the remaining reports being described as "briefing" or "interim" reports. These represent all but two reports that were completed for the NCA

between 2017 and 2020, which had been excluded due to the high level of sensitivity regarding the cases. At the time of the study, there was only one FCP working in the NCA. He was the author of all 36 reports. He had 30 years' experience as a profiler with law enforcement.

All 36 reports provided were evaluated to get a comprehensive understanding of the contribution of FCP reports to criminal investigations. Twelve reports (33.3%) were written in 2019 and 11 (30.6%) in 2020.

The mean number of pages for the 36 reports was 10.7 (SD = 9.0; Median 8.50; range 2–42). The ten full reports were significantly longer (mean = 20.0, median = 17.5, SD = 10.7, range 10–42) than the briefing (mean = 7.1, median = 5.5, SD = 4.9, range = 2.21) reports ($t = 5.0$, $df = 34$, $p < 0.001$). The reports varied in structure and rarely provided a summary of the case. The briefing reports generally presented only descriptions, statements and comments from the FCP. There is a detailed standard template available for NCA reports (Sigurdardottir *et al.*, 2023), but this was only used in ten (28%) of the reports.

Because of the sensitive nature of the material, some details had been redacted (e.g. the name of the author of the report and his or her qualifications, names of people and the operation). This did not adversely influence the current study.

The study was approved by an NCA research committee. It provided helpful feedback on the original research proposal from Reykjavik University. The feedback was incorporated into the current study, which was approved by the NCA.

General framework for analysis

The general framework for the analysis of the reports is a “pragmatic approach”, which incorporates the use of “Toulmin’s strategy” for structuring arguments and behavioural advice (Alison *et al.*, 2004). The pragmatic approach emphasizes the transparency of the overall FCP reports process, the need for understanding context and methodological rigour in the collection, evaluation and presentation of the pertinent crime scene information (Alison *et al.*, 2004; West, 2000). Toulmin’s (1958) strategy more specifically focuses on the application of pertinent arguments to the evaluation process (Almond *et al.*, 2007; Alison *et al.*, 2003), which can be provided by a “content analysis dictionary” (Alison *et al.*, 2003).

As far as the current reports are concerned, the study analysed to what extent the reports included an NCA standard template for reports (Sigurdardottir *et al.*, 2023), whether appropriate methodology appeared to have been used (e.g. theory, reasoning, literature, clinical judgement), whether the report was clearly written (e.g. the simple and easily understood language) and if caveats were declared (i.e. specific statements about the limitations of the claims and findings).

Content analysis dictionary [2]

A content analysis dictionary was constructed, where the dictionary variables in the current study broadly categorized into four separate sections (A–D) in terms of the nature of the data coded:

Section A: Claims. Section A referred to each individual claim made in the FCP report. A claim was described as any behavioural advice given by the FCP. This study only looked at the claims made by the FCP. All relevant claims to the behaviour advice of different types were added up and determined whether there was supported evidence for each salient claim. These variables were derived from “Toulmin’s strategy” for structuring arguments. The variables were coded as *present* or *absent* for each separate claim:

- *General claim* was coded if the claim contained information about characteristics of an offender in general and not an interpretation of the offender in the specific case (e.g. “Sexual homicide offenders often evidence psychopathic traits”).
- *Just a claim* was coded if the claim contained *no modality or grounds*.
- *Modality* was coded if the strength of the claim was provided or inferred, categorized as either “possible” (e.g. “The offender may have a history of past offending”) or “probable” (e.g. “The offender is likely to have a history of violence”).
- *Grounds* [for the claim] was coded if the claim included a clear description of the conditions on which a specific claim had been developed.
- *Warrant* was coded when there was deductive reasoning provided for the link between the claim and grounds.
- *Backing* was coded if the explicit support of the grounds was provided.
- *Rebuttal* was coded if the claim was provided conditionally.

Section B: Verifiability of the claims. Section B referred to the confirmability of each independent claim made by the FCP in the report. These variables were coded as *present* or *absent* for each separate claim: *tangibly verifiable*, *possibly verifiable*, *unverifiable* and *ambiguous*.

Section C: Report writer’s recommendations. Section C referred to any recommendations provided by the FCP, which were clearly linked to a specific claim. These variables were coded as *present* if the claim contained any investigative recommendations.

Section D: Overall utility of forensic clinical psychologist’s contribution. Section D focused on the apparent utility of the report as judged by the first and last authors (i.e. potential usefulness or benefit to the police investigation) without any input or influence from the author of the FCP reports.

Two types of utility were rated:

1. Utility in terms of potential investigative lead.
2. Utility in terms of behavioural analysis of the crime scene or offence-related behaviour.

The first and last authors’ panel agreement for each type of utility was coded as 0 (i.e. “low”; no apparent tangible incremental value to the investigation), 1 (i.e. “moderate”; supporting and enhancing existing investigative leads) or 2 (“high”; suggesting new tangible investigative leads). The description of each type of utility and examples are provided in [Appendix](#) (Section D).

Procedure

The reports were coded by the first author using a content analysis dictionary of the variables used in the study. Each report was independently read by the first and last authors. For each variable rated, the last author read all the first author’s ratings and discussed each one in turn before a mutual [panel] agreement was reached [3].

Each claim within the reports represented a unit of text. Each unit of text was coded on one or more of the variables described in the content analysis dictionary. If the unit of text could not be coded within this structure, the coder marked it as “uncodeable”. Each unit of text was coded with either 1 indicating *presence* or 0 indicating *absence*. Each report was coded with a *presence* or *absence* for each variable in Section A. Subsequently, the coder [the first author] identified each claim included in the report and coded each claim with a *presence* or *absence* for each of the variables in Sections B–D. If the report incorporated details about the offender characteristics, the coder would code each claim about the characteristics with a *presence* or *absence* for each variable.

These reports were complex in terms of rating because they often relied on judgements in determining the nature of the claims. In addition, it was not always easy to separate the *grounds* from the *backing* because of the way the material was presented. We decided to code it in the order it appeared in the text.

If the ground was based on an *inference* or an *assumption* from the tangible material relating to cause and effects, it was listed as an “explanation hypothesis” (e.g. “This offence is indicative of an offender who has considerable control over his emotions and behaviour”). Sometimes, research studies were used as the grounds for the claim, whereas on other occasions it was used for backing. On occasions, aspects of the same witness statement/forensics were used separately as grounds and backing.

Statistical analysis

Qualitative content analysis focuses on interpreting and understanding sets of written texts. This was done by coding units of text within the reports and then grouping these units into sections, and analysing the results accordingly. Descriptive statistics were used to give an overall view of the breadth and scope of the findings.

Results

Type of crime and reports

The type of crime listed in the 36 FCP reports were categorised as follows:

- Murder ($n = 19$; 52.8%) and equivocal [suspicious] death ($n = 3$; 8.3%).
- Sexual offences ($n = 2$; 5.6%).
- Other ($n = 12$; 33.3%). This included assault, harassment, burglary, firearm offences, construction and placing of a bombing device, satanic abuse and high-risk missing persons.

Thirty-four (94.4%) of the reports involved a current offence and two (5.6%) a historical offence (i.e. a cold case review). One (2.8%) report involved a joint FCP and BIA collaborative evaluation. Only in five cases (13.9%) did the FCP report specify a visit to the crime scene. Instead, there was reliance on crime scene videos and photographs, particularly during COVID.

Professional standards

Eleven (30.6%) of the reports used an NCA standard template for the reports, which enhanced their service delivery. Most of the reports were judged as using appropriate methodology (97.2%), were clearly written (94.4%) and provided caveats (69.4%).

Terms of reference and the focus of the advice content within the reports

The reports examined various types of issues addressed depending on the crime under consideration and terms of reference. Terms of reference were explicitly stated in 18 (50%) of the reports. There was a total of 27 terms of reference, ranging from one to three. All terms of reference were addressed in 16 out of 18 instances (89%).

Typically, each report addressed several separate issues, the most common ones being offender profiling and behavioural interpretations of the crime scene, as shown in [Table 1](#).

Table 1 Key issues focused on in the report

<i>Issues addressed</i>	<i>n (%)</i>
Offender profile	26 (72.2)
Behavioural assessment of the crime scene	19 (52.8)
Interview of suspect or witness	7 (19.4)
Risk assessment and management	6 (16.7)
Mental state evaluation	3 (8.3)
Media considerations	3 (8.3)
Review of medical records	2 (5.6)
Psychological autopsy	1 (2.8)
Veracity assessment	1 (2.8)
Source: Authors' own creation	

Claims

The 36 reports contained a total of 539 claims. The average number of claims per report was 15 (median = 13.5; SD = 8.80, range 1–35). Sixteen (3.0%) of the claims were considered ambiguous.

Table 2 shows that most of the claims in the reports focus on offender characteristics and involved behavioural characteristics of the crime scene evaluation.

Forty-three (8.0%) of the 539 claims were *general claims*, containing information about the general characteristics of an offender with no specific reference to the case under investigation. A further seven (1.3%) of the claims were *just a claim*, with no modality or grounds for the claim.

Table 3 provides a summary of the number of claims, modality, grounds, warrant, backing and rebuttals. Out of the 539 claims, 489 (91%) involved a designated modality (e.g. “possible” or “probable”). Over two-thirds of the claims were rated as potentially verifiable.

Grounds were provided for (99%) of the claims. Either a warrant and/or backing for these grounds was provided in over half (57%) of the claims. Rebuttal was only used in 14 of the reports on a total of 23 occasions.

Types of grounds provided (frequency = 532)

Table 4 shows the frequency and percentage of the type of grounds made in the reports. The results show that most of the grounds in the reports were in the form of explanation hypothesis (80%).

Table 2 Broad categories of claims

<i>Type of claim</i>	<i>n (%)</i>
Offender characteristics	318 (59.0)
Behavioural characteristics	163 (30.2)
Veracity statements (e.g. commenting on the potential accuracy of suspect/witness statements)	26 (4.8)
Mental state comments	26 (4.8)
Linking crimes	4 (0.7)
Geographical statement regarding offender	2 (0.4)
Total	539 (100)
Source: Authors' own creation	

Table 3 Claims, modality, verifiability, grounds, warrant, backing and rebuttal

<i>Type of claim</i>	<i>Frequency (%)</i>
Total number of claims	539 (100)
<i>Modality of claims</i>	
None	50 (9.3)
Possible	180 (33.4)
Probable	309 (57.3)
<i>Verifiability of claims</i>	
Unverifiable	203 (37.7)
Possibly verifiable	328 (60.9)
Tangible verifiable	8 (1.5)
Grounds provided	532 (98.7)
Warrant	100 (18.6)
Backing of claim provided	207 (38.4)
Rebuttal	23 (4.3)

Source: Authors' own creation

Table 4 Categories of grounds provided

<i>Grounds</i>	<i>n (%)</i>
Explanation hypothesis	427 (80.3)
Academic study	35 (6.6)
Clinical or investigative experience	19 (3.6)
Forensics	13 (2.4)
Theory	8 (1.5)
Medical record	8 (1.5)
Psychological interview	7 (1.3)
Witness statement	6 (1.1)
Psychological testing	4 (0.7)
Offender statement	3 (0.6)
Psychiatrist report	1 (0.2)
Geography	1 (0.2)
Total	532 (100)

Source: Authors' own creation

Type of backing (frequency = 207)

Table 5 shows the frequency and percentage of the type of backing made for the 539 claims in the reports. Most of the backing was in the form of forensics (38.2%) and study (23.2%).

Clinical input

Table 6 shows the type of clinical and forensic offender characteristics in the reports. Most of the cases involved a suspect or known offender. The most common focus in the reports was on personality characteristics, motivation for offending, personality disorder and comments on planning of the offence.

Report writer's recommendations

Table 7 shows the frequency and percentage of investigative recommendations made by the FCP. The FCP gave 209 investigative recommendations ($M = 5.8$, $SD = 5.6$, median = 4.0, range 0–24) where they principally focused on lines of enquiry, interview strategy and risk assessment.

Table 5 Categories of backing provided

<i>Backing</i>	<i>Frequency (%)</i>
Forensics	79 (38.2)
Academic study	48 (23.2)
Witness statement	31 (15.0)
Psychological interview	15 (7.2)
Theory	12 (5.8)
Experience	7 (3.4)
Medical records	6 (2.9)
Geography	4 (1.9)
Offender statement	3 (1.4)
Psychological testing	1 (0.5)
Database	1 (0.5)
Total	207 (100)

Source: Authors' own creation

Table 6 Main offender characteristics as described in the 36 reports

<i>Characteristic of offender</i>	<i>n (%)</i>
Suspected/known offender	23 (63.9)
Personality characteristic	25 (69.4)
Motivation for offending	22 (61.1)
Personality disorder	14 (38.9)
Offence involved planning	13 (36.1)
Developmental disorder	11 (30.6)
History of violence	11 (30.6)
History of mental health problems	10 (27.8)

Source: Authors' own creation

Table 7 Investigative recommendations

<i>Investigative recommendations</i>	<i>No. of recommendations (%)</i>
Lines of enquiry	80 (38.3)
Interview	51 (24.4)
Risk of future offending	29 (13.9)
Other experts to contact	23 (11.0)
Media/hostage negotiation	13 (6.2)
Clarities requested	11 (5.3)
Forensic analysis	2 (0.9)
Total	209 (100)

Source: Authors' own creation

Utility

Table 8 summarizes the overall utility in terms of behavioural analysis and potential new leads for the FCP reports. Out of the 36 reports, most of the reports provided either moderate or high detailed *insight* into the crime scene (92%) and *potential* for new enquires (64%).

Discussion

General overview of the findings

It is apparent that the FCP reports were generally customized to the unique characteristics of the case under evaluation, suggesting a flexible case-by-case approach while

Table 8 Utility in terms of potential new leads and behavioural analysis

Utility	Behavioural analysis of the crime		Potential new leads	
	n	%	n	%
Low	3	8.3	13	36.1
Moderate	26	72.2	16	44.4
High	7	19.4	7	19.4
Total	36	100	36	100

Source: Authors' own creation

sometimes citing the relevant academic and clinical literature. This approach appears to be favoured by some SIOs, particularly when combined with the FCP's extensive investigative experience of cases and quick feedback to the SIO. Each case represents an ideal opportunity for the practitioner to learn, improve professional practice and facilitate science development (Gudjonsson, 2021; Gudjonsson and Haward, 1998).

The current study extends the contributions of studies of Alison *et al.* (2003) and Almond *et al.* (2007) by categorizing the specific nature of the grounds, modality, verifiability, warrant, backing and rebuttal specifically for FCP reports. The previous studies focused on BIA reports. It is important to distinguish between FCP and BIA reports because the former are inherently more dynamic in nature (Fox and Farrington, 2018). The current findings show the FCP reports focused primarily on understanding the offenders' psychopathology, actions, motivation and risk to self and others using a practitioner model of case study methodology, which on many occasions involved a known suspect.

The lack of backing for many of the claims in the current study suggests that there was heavy reliance on clinical and investigative experience rather than on academic and empirically based practice. The risk is that there will be inconsistencies between clinicians in their judgements of cases (Kahneman *et al.*, 2021). The real challenge in the future is to combine more rigorously the experienced-based approach with empirically based evidence.

An important finding is that most of the cases (64%) involved a suspect or known offender. This is in great contrast to the work of BIAs, where only seven of 77 (9%) cases analysed involve a suspect or known offender (Sigurdardottir *et al.*, 2023). This represents a fundamental difference in the role and practice of FCPs and BIAs. It explains the most common recommendations in the FCP reports: focus on new lines of enquiries (38%), interview recommendations (24%) and risk of future offending and risk management (14%). While the work on advising on new lines of inquiry substantially overlaps with that of BIAs, advice on risk assessment of future offending and risk management regarding an individual case falls distinctly under the domains of the FCP (Gudjonsson *et al.*, 2015).

Similarly, advice on interviewing strategy of suspects, focusing on understanding psychopathology and vulnerabilities that may impact on the outcome and integrity of the interview may be helpful to an investigation (Gudjonsson, 2023). While performing this task, the FCP needs to be cognizant of the legal framework of PACE, Code C of Practice and College of Policing Advice and "gold standard" evaluation of individual cases (Gudjonsson, 2023). In addition, the FCP needs to be familiar with the various legal aspects of memory that may impact on capacity (Baddeley *et al.*, 2023).

In addition, recently, Vaughan *et al.* (2022) have proposed an innovative strategic framework for the management of interviews in high stakes crime investigations, which recommends a research-based interview process, focusing on the interview process itself, monitoring of the process and its evaluation. An FCP may also be commissioned to assist with the interpretation of subtle indirect admissions during a covert operation, as in the case of the Newall brothers in Jersey (Brown and Cheston, 1994, p. 131), and the credibility of a

crucial witness, Anne Marie Davis, in cases against her mother Rosemary West (Goatley, 2019, pp. 46-47) who was convicted of ten murders in 1995 at Winchester Crown Court.

The offences and issues addressed in the reports

While there was a broad variety of offences, the majority (61.1%) involved murder or equivocal death. Only two of the cases involved sexual offences, which contrasts with the work of BIAs, where traditionally there has been considerable focus on sexual crimes (Almond *et al.*, 2007). This highlights the complementary nature of the BIA and FCP contributions in criminal investigations despite common and overlapping goals.

The issues addressed in the reports were typically clearly articulated. The reports showed that there were a range of different issues addressed, the four main issues being: issues to do with behaviour, character, possible psychopathology and motivation of the offender; behavioural assessment and enhanced understanding of the crime scene; interviews of suspects and witnesses and risk assessment of the offender regarding re-offending and risk management. West (2000) has previously emphasized the need for comprehensive offender information when these are available, as well as using theory and research-driven principles as the foundation for mapping out the crime scene evaluation.

FCPs and multidisciplinary colleagues need to be aware of changing trends in offending patterns, substance misuse and mental health issues, as well as being familiar with all relevant current and past literature pertinent to different types of crime, background characteristics, personality and psychopathology. Ready access to the academic and practitioner literature is paramount.

Ten (28%) reports were presented as full reports and 26 (72%) as briefing reports. The reason for the disproportionate number of briefing reports, which were significantly shorter than the full reports and less detailed, was the common practice of the FCP to provide rapid feedback to the senior investigating officer (SIO), where time was seen to be of the essence to an ongoing investigation. *This is particularly relevant to high-risk murder investigations, which were often the focus in the current reports.* Another important issue was that at the time of the reports, there was only one FCP, and the demands on his time limited the amount of time available for the preparation of a detailed and lengthy report. A newly appointed second part-time FCP within the NCA will ease the pressure on the time of FCPs and make it easier to follow the working practice guidelines for BIAs, FCPs and geographic profilers set by the ACPO Sub-Committee for Behavioural Science in 2001 (Rainbow, 2008).

The newly established BaSS Capability Development will need to review and revise these professional guidelines to meet the evolving and changing needs and priorities of the NCA. BaSS comprises multidisciplinary knowledge and skills in several areas, including psychology, sociology, criminology, economics, archaeology and anthropology.

Offender characteristics, motivations for offending and psychopathology

As far as the 36 reports are concerned, there were two offender characteristics that dominated: a personality description of the offender (69.4% of reports) and the motivation of the offender (61.1% of the report). The personality descriptions in the reports broadly resemble those provided in Boon (1997). Alison *et al.* (2004) emphasize the need of the FCPs to develop an understanding of the offender's motivation, using their experience in assessing and treating offenders, combined with a detailed analysis of the crime scene material (e.g. crime scene visits and photographs, pathology report and witness statements). This was the basis on which the FCP reports interpreted the offender's motivation in the current study.

The relationship between anger and violence is well established, but there remains a debate in the current literature regarding the nature of this relationship (Joyce *et al.*, 2013).

From the perspective of the FCP advising on criminal investigations, it is important to understand and apply all current knowledge about different motivation factors that drive offending. This includes, as appropriate to the offence under investigation, understanding the context and nature of the offence, scrutiny of the crime scene and studying witness statements and pathology reports. This evaluation process may provide helpful information about the possible role of mental illness (e.g. delusions), psychopathology (e.g. antisocial personality disorder, sadism, extreme narcissism, extreme controlling behaviour, developmental disorders), cognitive (violent attitudes) and emotional (anger, rage) factors in motivating the offender, facilitating the offence and determining its nature and severity.

Claims, modality and verifiability

The 36 reports contained a total of 539 claims, with each report containing over a dozen different claims, which is consistent with previous similar research of BIAs reports (Almond *et al.*, 2007). The claims focused mainly on offender characteristics (59%), followed by behavioural characteristics (30%). Geographic profiling did not feature in the FCP's reports, which is a positive sign. Geographic profiling represents a speciality that does not generally fall within the remit of the FCP (Fox *et al.*, 2020). It shows the FCP's practice to limit enquires and advice to areas within his speciality.

Overall, over 90% of the FCP's claims reported the modality or strength of the claim, where the majority (57%) of the claims were indicated as "probable" and 33% as "possible". This is in line with what was found in the study by Almond *et al.* (2007) of BIAs reports. However, unlike the Almond *et al.* study, where 18% of the claims were described as "definite", none of the claims in the current study were classified as definite, which is reassuring. It is highly unlikely that the claims of FCPs could be expressed as "definite" unless they involved claims that were clearly obvious to everybody from the crime scene.

Over one-third (38%) of the claims were unverifiable, and a further 61% were possibly verifiable. Only a very small minority (1%) were tangibly verifiable. This is due to the nature of the claims made in the FCP's reports (i.e. descriptions of the offender's thoughts, feelings, motivation for offending, social skills and personality and mental state characteristics), a problem identified in previous publications (Chifflet, 2015; Fox and Farrington, 2018; Fox *et al.*, 2020). In contrast, BIA reports appear to be more easily verifiable due to the more tangible characters of the offender (e.g. age range, geography and linking of serial offences (Almond *et al.*, 2007; Sigurdardottir *et al.*, 2023).

Grounds, warrants and backing

Almost all (99%) of the claims made by the FCP contained grounds that provided a clear description of the conditions on which a specific claim had been made. Most of the grounds (80%) for the claims in the FCP reports were in the form of explanation hypothesis, where inferences were drawn from the interpretation of the crime scene or witness statement (e.g. "This offence is indicative of an offender who has considerable control over his emotions and behaviour at this time"). The ground, the specific basis on which the claim was provided, was rarely based on empirical evidence.

In the current study, if the claim was based on information pertaining to the crime scene, for example, pathology report, CCTV footage and photographs, it was coded as grounds. If inferences were drawn from the crime scene and interpretations made, then it was coded as a warrant or backing. It is interesting to note that the FCP more commonly used forensics for backing than the ground of the claim. The reason is likely to relate to the methodology the typical methodology the FCP used for his evaluation of the crime, which is an evolving discipline rather than an established scientific procedure where the focus is on developing a greater understanding of the mechanism behind the offending (Alison *et al.*, 2004). To understand the mechanism involved, there would be a need to understand the individual

components and process that impacted on the mechanism driving the offending (Gudjonsson, 2021, 2023).

From the evaluation of the current reports, it seems that the FCP relied heavily on his extensive forensic clinical and investigative experience of offenders, guided by theory and research, to help understand the offender's background, mind-set (thinking process and motivation), personality and possible underlying psychopathology. The process is essentially dynamic, reflective and individualized rather than empirically based. The grounds provided for the claims were typically based on inferences and/or assumptions made by the FCP, which were backed by logical reasoning, and on occasions forensics or research studies. The advantage of this methodology is that it provides a flexible approach for possible understanding of the offender, their motivation and actions. The disadvantage is that it is difficult to verify the accuracy of the "profile" and its individual components (Chifflet, 2015; Fox *et al.*, 2020).

Overall utility of the reports

In terms of the two types of *utility* measured (i.e. "salient 'behavioural analysis of the crime' and 'potential new leads' and [scene]), 92% of the reports contained behavioural analysis claims and recommendations that were judged to be either moderate or high. The rate for moderate or high utility in terms of providing potentially new leads was reasonable (64%).

Importantly, the determination of utility does not necessarily reflect the view of the SIO, nor does it provide evidence for the accuracy of the claims in the reports. What it does provide is an overall judgement of the researchers' view about the potential usefulness or benefit of each report to the police investigation, not contaminated by any knowledge or judgement of the case under investigation (Kahneman *et al.*, 2021).

Strengths and limitations

In terms of strengths, this is the first study of its kind to focus specifically on FCPs reports using Toulmin's model of argument to investigate the components of the claims made in the report. The second strength is that all reports were read independently by two of the authors, neither of whom had had any input into the reports evaluated. Third, Adrian West, the author of the 36 FCP reports, read an earlier draft of this article and provided additional insights into his work as a FCP within the NCA. This provided a more holistic and informative approach to the current article and future directions for forensic clinical psychology. Hopefully, the current study will encourage FCPs in the future to engage in a more rigorous and systematic process of argumentation and substantiation of claims (Chifflet, 2015).

Despite its strengths, there were several limitations. Firstly, most of the reports were not full reports, which limited the information that was available for review and analysis. For this reason, a detailed analysis of reports' compliance with past ACPO guidelines regarding completeness and professional standards (Rainbow, 2008) is not presented in full. Terms of references were only provided for 18 (50%) of the reports, but when they were provided, they were mostly met.

Secondly, the number of reports reviewed were modest but consistent with similar research among BIAs (Almond *et al.*, 2007). Thirdly, the 36 reports represent the contribution of only one FCP, which is both a strength and a weakness. The strength is that it can provide an in-depth and consistent pattern of the work of that one FCP where his extensive experience of single case study methodology can advance future practice in a particular area of endeavour (Gudjonsson, 1996a). The limitation is that a variety of forensic clinical psychology perspectives exist, based on the FCP's training, theoretical orientation, experience, practice and individual preferences, which is likely to influence FCP practice (Gudjonsson, 1996b; Gudjonsson and Haward, 1998).

The pragmatic and dynamic nature of forensic clinical psychologists' contributions

It is the role of forensic clinicians involved in the clinical assessment, risk assessment and risk management of offenders with violent and sexual offence histories to identify and describe as accurately as possible the conditions that have led to an offender's current legal situation. This clinical understanding and experience, both tacit and formal, when incorporated with knowledge of the many facets of the behavioural science evidence base, can with the necessary safeguards, be usefully applied to the various multidisciplinary efforts that contribute to the investigation of major crime. As practitioners, the FCPs focus primarily on the details of the case under investigation rather than attempting to understand general patterns and trends (Alison *et al.*, 2004).

The current findings show that the author of the 36 reports relied heavily on his clinical and investigative experience and knowledge of the behavioural science literature to develop a working (provisional) hypothesis about the type of offender who could possibly be involved in the offence, often followed by an explanation hypothesis regarding the cause (e.g. anger problems, mental health issues) and the effect (e.g. loss of control). Eells (2015) provides a helpful guide to understanding the importance of an explanation hypothesis in case formulation. It is evident from the 36 reports that the author uses a hybrid approach in terms of inference and deductive reasoning, combining clinical experience, investigative experience and scientific literature.

Importantly, sometimes the FCP provides informative verbal guidance to the SIO that entails translating clinical phenomena in practical terms that are readily understandable and provide utility to the SIO. These may not feature in briefing or full reports. In addition, FCPs sometimes provide advice on foreign cases on behalf of the NCA.

Working alongside law enforcement investigative specialists requires a discipline of thoroughness, detailed analysis and review of relevant available collateral information. Visits to crime scenes and the hours spent reviewing crime scene data and witness statements introduces another level of understanding of functional and behavioural analysis relevant to the FCP's role and advice. Any advice provided, which can continue from the time of the initial briefing to follow-up consultation after the FCP report is completed, requires good communication between the FCP, other specialists and SIO, mutual respect, established boundaries and clear documentation of any advice provided, time and date.

The FCP should always work on the basis that any advice given to the SIO may be challenged when the case goes to court. Certainly, cases involving a suspected offender may require the FCP to give evidence in court and be cross-examined (Gudjonsson and Haward, 1998).

Due to the sensitive nature of the FCP's work, which often involves giving interviewing and risk assessment advice on known suspects, it is essential that they have professional registration with the HCPC. Ready access to clinical supervision, peer discussions and continuous individual and multidisciplinary professional development are essential but are not always readily available or achievable due to the sensitive nature of the work and lack of resources.

Until 2021, and during this study, there was only one part-time FCP working within the NCA, which was not sustainable in the long term due to relentless pressure on one person and limited peer support. On occasions, this may have affected the overall detail and comprehensiveness of the reports. The current employment of two part-time FCPs provides an opportunity to improve the presentation and content of the FCP reports by using the NCA standard template for all reports, as currently done by the BIAs (Sigurdardottir *et al.*, 2023).

Police investigative work often requires a long-term commitment to an investigation and a readiness to be always available to provide timely advice in sometimes dynamic and highly challenging circumstances. The stress, responsibility and accountability that underlie the

requests to provide urgent advice should not be underestimated. Failures of discipline in accurate note taking and report writing will always be there to be discovered in any potential disclosure process or cross-examination in court. Awareness and commitment to necessary professional and ethical discipline also ensure that trust between the advisor and the investigative team remains, though it can never be taken for granted.

Finally, the demand and psychological pressure on FCPs and other officers in criminal investigations require resilience and attendance to stress-related issues, which can deleteriously impact both on professional performance and mental health (Cho, 2023; Porter and Lee, 2023).

Future directions

The role of FCPs and their multidisciplinary colleagues, including BIAs and a geographic profiler, is to optimize collective investigative experience and the scientific methods that underpin knowledge of the respective disciplines into an incident room to ensure that the SIO has the best information available to make informed decisions regarding operational matters and new lines of inquiries. Essentially, the FCP, BIAs, geographic profilers, other disciplines and the SIO must understand and respect each other's perspective and work as an effective team in the interest of fighting serious and organised crime.

Good collaborative teamwork is of the essence in producing and developing top quality BaSS input into criminal investigations and intelligence led policing. Due to the common multidisciplinary nature of investigative advice, it can be difficult to disentangle the individual contributions of each discipline. This makes it too simplistic to merely focus on individual components of separate disciplines and expect a magic "silver bullet" in the fight against crime.

Ideally, future research should focus on objectively reviewing the entire investigative process in serious cases (i.e. a holistic approach), including the decision-making process of the SIOs and how advice from different disciplines, individually or collectively, was used and impacted on the SIO's decision-making process. This type of holistic approach has been developed and used effectively for understanding risk factors to false confession in cases of wrongful convictions (Gudjonsson, 2018, 2021, 2023).

Future research also needs to focus on objective ways on measuring utility (e.g. from the SIO perspective – see Copson, 1995) and the estimated cost effectiveness of the contributions of behavioural and social scientists to criminal investigations and intelligence led policing.

Finally, we recommend that when there is a known outcome in a case, a researcher should do a qualitative interview with the SIO and analyse their reflections on what was positive and what could be improved regarding the FCP advice. A case study analysis would go some way of understanding the incremental value (utility) of the advice provided by FCPs, BIAs and geographical profilers to the investigation.

Conclusion

This is the first study to analyse in detail the current contribution of forensic clinical psychology reports to criminal investigations in the UK. The findings, based on 36 reports submitted between 2017 and 2021, show that the advice provided relied heavily on extensive forensic clinical and investigative experience of offenders and was often performed under considerable time pressure.

Research approval

The study was approved by a NCA research committee and supported by Reykjavik University. The NCA had redacted some sensitive details from the reports prior to the disclosure of the research.

Acknowledgments

The authors are grateful to Russell Day, Andrew Murphy and Sarah Rock for their continued support during the study. Dr William Gordon provided helpful comments on an earlier draft of this article, as well as the Journal's Reviewers and Editor. The authors are grateful to the NCA for funding an Online publication of this study.

Conflict of interest: AW was the author of the reports. He did not have any input into the review or analysis of the reports. TDS and GHG have no conflict of interest, apart from GHG currently working as a NCA "Special" within the strategic development of BaSS Capability.

Data disclosure statement: The data set cannot be disclosed due to the sensitivity of the data.

Authors' contributions: GHG and TDS designed the study with helpful input from Lee Rainbow (NCA). TDS and GHG reviewed the reports and analysed the data. TDS produced the initial draft of the article with substantial input from GHG, followed by contributions from AW and a final draft by GHG.

Notes

1. The terms "criminal", "offender" and "psychological" profiling are sometimes used interchangeably (e.g. Muller, 2000; Fox *et al.*, 2020).
2. A copy of the *content analysis dictionary* is provided in Appendix.
3. Co-author Adrian West, whose 36 reports featured in the study, for strategic reasons only became involved in the actual study after reading a draft of the paper and provided added depth and insights into his role and contribution as a FCP to criminal investigations.

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Appendix. Content analysis dictionary

Section A: Claims:

1. *Grounds*: information provided with either an explicit or implicit description of the conditions on which a specific claim had been developed.
2. *Backing*: information provided with explicit support of the grounds in the form of cogent inferences derived from a solid premise, reasoning, theory or data.
3. *Warrant*: a deductive reasoning provided for the link between the claim and grounds (e.g. "Victim had limited defensive injuries, unlikely he had a chance to physically respond to attack"; "Unlikely that this offence represents a well-organised, premeditated incident, but rather a more spontaneous, responsive set of actions to an evolving scenario"; "Likely that the offender accompanied or followed the victim as she continued her usual walk and attacked her once they got to the site").
4. *Explanation hypothesis*: was only coded for grounds. Represent inferences and/or assumptions made by the FCP. Inferences drawn from witness statements or interpretations of the crime scene (i.e. "The victim's lifestyle had exposed him to loan sharks and drug dealers"; "Nothing within the offence would suggest that she had been personally targeted by the offender"; "This offence is indicative of an offender who has considerable control over his emotions and behaviour at this time").
5. *Study*: sources of inferences referred to. Grounds and backing could be interchangeable depending on how it is said and argued; if the study is mentioned first, it was coded as grounds. If interpretations were made first and then a study used to back it up, it was coded as backing.
6. *Database*: information provided with explicit support in the form of a police database.

7. *Theory*: if the BIA/FCP talked about a specific theory or referred to research or behavioural science literature without providing a citation, it was coded as theory.
8. *Experience*: clinical, behavioural science and investigative experience.
9. *Witness statement*: if the claim was based on what the witness said, it was coded as grounds. If inferences were drawn from the witness statement, it was coded as backing.
10. *Forensics*: if the claim was based on information pertaining to the crime scene, for example, pathology report, CCTV footage and photographs, it was coded as grounds. If inferences were drawn from the crime scene and interpretations made, it was coded as backing.
11. *Rebuttal*: coded if any conditions are stated, under which the claim might fail to be probable or may need to be adjusted accordingly were provided.

Categories of claims:

1. *Offender characteristics*: things that relate to the identification of the offender himself/herself (i.e. "The offender is likely to be a younger male who suffers from some sort of learning disability").
2. *Behavioural*: understanding of the offence from a behavioural perspective (i.e. "The attack was likely opportunistic and spontaneous where he spent long periods of time watching or following young women").
3. *Geographical*: things that relate to where the offender might be located (i.e. "The offender is likely to either live locally or have a familial connection with this area").
4. *Linking*: determine whether two or more crimes have possibly been committed by the same offender (i.e. "Given the striking similarities in offending behaviour, it is likely that these offences are linked").
5. *Temporal*: things that relate to the timing of offence (i.e. "The victim is likely to have been attacked sometime between 23:00 and 02:00").
6. *Veracity*: things that relate to the accuracy of allegations (i.e. "There is strong evidence to substantiate the victim's allegations").
7. *Mental state*: things that relate to the mental state of the offender or victim before the offence occurred (i.e. "By that stage, having arrived at a point of conviction about her future course, she also appears to have found some peace"; "She may be experiencing delusional beliefs and that such beliefs in the context of her history could therefore be exacerbating her risk of self-harm").

Section B: Verifiability of the claims:

Section B referred to the verifiability of each independent claim made by the FCP in the report. These variables were coded as *present* or *absent* for each separate claim:

8. *Tangibly verifiable* was coded if the claim could be simply measured and verified post-conviction (e.g. age, sex of the offender, criminal conviction).
9. *Possibly verifiable* was coded if the claim could possibly be verified post-conviction, for example, with a psychological test or detailed inspection (e.g. personality disorder, mental health problems).

Unverifiable was coded if the claim could not be measured or verified post-conviction, such as the offender's thoughts, feelings or motive for the crime, or value judgement of the FCP (e.g. "Hiding of the bodies from open view indicates a level of self-control in the perpetrator's post offence behaviour"; "Level of violence exhibited is clearly far greater than that required to control the victim").

Section C: Report writer's recommendations:

1. *Lines of enquiry*: Information the enquiry should follow-up on (i.e. "Any individual known or suspected of such abuse should be subject to significant scrutiny"; "Likely that the offender had sought professional intervention for his mood").

2. *Prioritization of suspects*: Prioritizing possible suspects or group of individuals (i.e. "The offender is likely to be between 25–35 years of age"; "The offender is likely to be of foreign origins").
3. *Forensic analysis*: Recommendations on analysing the forensics in more detail (i.e. "It is recommended that all pictures available are analysed to ascertain if the injuries can be accurately dated").
4. *Risk of future offending*: Provide information on the circumstances a person is more likely to be at an increased risk of offending or re-offending (i.e. "offending is unlikely to stop, and the possibility of additional escalating sexual acts should not be dismissed").
5. *Interview*: How to effectively interrogate the suspect in custody or other witnesses (i.e. "Such reassurances are likely to improve cooperation from those fearful of the potential/perceived negative consequences of naming friends or family to the police").
6. *Surveillance*: Recommendations on where to look out for the offender (i.e. "Such behaviour may be exhibited as habitual patterns of prowling activity, as such the potential value of covert surveillance, stop check, etc cannot be overstated as a viable investigative tactic").
7. *Media advice*: Information on how to use and expand the use of media (i.e. "It is believed an extended focus on capturing further victims and incidents may prove valuable"; "It is worth ensuring that a media presence is maintained to serve as both awareness raising exercise for members of the public and also a deterrent of the offender himself").
8. *Other experts to contact*: Recommendation to contact other experts, for example, geographical profiler, linguistic specialist, psychiatrist and other advisors (i.e. "Professional opinion with regards to the possible implications of animal activity in the area is recommended in order to clarify the relevance of these findings").
9. *Clarities requested*: Recommendations on what to examine in more detail (i.e. "Clarity is sought regarding the precise nature of the prescriptions present and to whom they were prescribed").

Section D: Utility:

Utility was based on two separate aspects of the reports: utility in terms of furthering potential investigative leads, and utility in terms of potentially useful behavioural analysis of the crime scene or offence-related behaviour. Determination of utility was based on the overall [joint] value judgement of the first and senior authors after an appropriate discussion:

1. *Utility in terms of potential investigative leads*: Utility within the context of investigative parameters which refers to how practical the information is in terms of investigative utility. How practical is the information to the investigative process, and to what extent can the police use the information for their enquiry?
 - *Low utility*: the report was coded as low if conservative estimates were presented with incremental value. If information was provided that the police already knew, we rated the utility as low. Findings were somewhat complicated and difficult to follow-up with; no real conclusions were presented (i.e. "Possible that such actions reflect a degree of social isolation and difficulty engaging with females").
 - *Moderate utility*: the report was coded as moderate if there were not necessarily new leads for the enquiry, but the report supported the testimony of others, involving an interactive process with other professionals and the police.
 - *High utility*: the report was coded as high if the report presented new leads which the enquiry could investigate, and the findings were easy to understand and follow.

2. Utility in terms of behavioural analysis of the crime scene or offence-related behaviour: information in the reports provides a detailed insight into the crime scene. Gives the enquiry an understanding of the nature of circumstances of the offence. Providing information about what could possibly have happened rather than pointing out who is guilty.
- *Low utility: the report was coded as low if it gave few new perspectives of the case. If the information provided were more logical and had little incremental value, something the police officers would normally do anyway.*
 - *Moderate utility: the report was coded as moderate if it provided a good explanation without providing empirical support. The utility could have been higher if they had presented supporting behavioural evidence (references). Also coded as moderate if the FCP focused too narrowly on a specific hypothesis, if that one hypothesis was wrong, the whole report had no incremental value and could be misleading for the enquiry.*
 - *High utility: the report was coded as high if it gave a good explanation of the circumstances of the offence and was supported with empirical evidence which was cited.*

Source: Authors' own creation

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