Serious Violent Crime Investigations: 
A systematic literature search and technical report

prepared for the 
National Policing Improvement Agency

July 2009

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Centre of Excellence in Policing and Security (CEPS)
Serious Violent Crime Investigations:
A systematic literature search and technical report to the National Policing Improvement Agency*

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Centre of Excellence in Policing and Security (CEPS)

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This report represents the views of the authors and not those of the NPIA.
Executive Summary

In April 2009, the RAI commissioned CEPS to conduct a systematic search, and design and populate an associated evidence database on a range of topics relating to the investigation of serious crime. To guide the literature search, the RAI proposed the following questions:

1. What are the processes by which serious crime is investigated and do these vary by crime type?
2. What are the strengths and weaknesses within the investigative process in terms of the successful detection of crime?
3. What are the aspects of serious crime investigations that effectively and efficiently contribute to the detection (and conviction) of serious crime and does this vary with crime type?

As part of this process, CEPS developed a search strategy to capture relevant literature, coded ineligible and eligible publications, constructed a database and library of eligible publications, and prepared a technical report outlining this process to enable the RAI to replicate the search in the future.

Main findings from the report:

1. In total, 17,471 publications were identified, reviewed and coded over the course of the project. Of these, 2,046 records were coded as relevant to the research questions, and of these, 948 were unique records. Over half (52%) of the excluded records did not relate to the investigative process and over one quarter (28%) were excluded because the article focused on a non-serious crime (although articles that did not mention a crime type were classed as eligible).

2. Cambridge Library retrieved 25 percent of total eligible publications, however, given that eligibility was determined by a review of the title not the abstract (as was the case in all other databases), this result should be interpreted with caution. Ingenta retrieved 23 percent of all eligible publications, a result that is much more reliable.
3. Overall, only 12 percent of all publications were assessed as relevant to the research questions. Despite an extensive piloting process, the broad nature of the research questions and the differential treatment of search combinations by the various databases rendered the search strategy less effective than intended.

4. Future systematic searches would be more successfully employed to examine literature around a single dimension of the investigative process (e.g., interviewing) or around the investigative processes used in a particular crime application (e.g., sexual assault).

5. The search terms police and investigation produced the greatest number (n=265; 14% eligibility) of eligible publications, followed by police and evidence (n=241; 9% eligibility).

6. An analysis of the eligible literature showed that the majority of publications into serious crime investigation have employed a quantitative research design. Survey methods were most frequently used followed by interviews.

7. Overall, 70 percent of eligible publications related to the serious crime investigative process.

8. Over half (N=594) of the publications did not mention a specific offence type in the abstract and were coded as ‘generic’. Of those that did specify an offence type, the majority (35%) related to murder. Very few articles specifically mentioned wounding or assault, infanticide or manslaughter.

9. The numbers of publications relevant to serious crime investigation have steadily increased since 1970.
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<thead>
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<th>Meaning</th>
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<tr>
<td>CEPS</td>
<td>Australian Research Council Centre of Excellence in Policing and Security</td>
</tr>
<tr>
<td>CSA</td>
<td>Cambridge Scientific Abstracts (also known as Criminal Justice Abstracts via CSA illumina)</td>
</tr>
<tr>
<td>CINCH</td>
<td>Australian Criminology Database</td>
</tr>
<tr>
<td>NPIA</td>
<td>National Policing Improvement Agency</td>
</tr>
<tr>
<td>RA</td>
<td>Research Assistant</td>
</tr>
<tr>
<td>RAI</td>
<td>Research, Analysis and Information Unit</td>
</tr>
<tr>
<td>SRA</td>
<td>Senior Research Assistant</td>
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### List of Appendices

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<td>Appendix A</td>
<td>Serious Crime Investigation Training and Coding Document</td>
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<td>Appendix B</td>
<td>Specific Database Instructions</td>
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<tr>
<td>Appendix C</td>
<td>References of Relevant Literature</td>
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</tr>
</tbody>
</table>
1. Introduction and overview

1.1. Background

The National Policing and Improvement Agency (NPIA) seek to understand the evidence base in relation to the effective investigation of serious crime to support its knowledge management strategy and National Improvement Strategy for Policing. Consequently, in April 2009, the Research, Analysis and Information (RAI) Unit of the NPIA commissioned CEPS to conduct a systematic search, and design and populate an associated evidence database on a range of topics relating to the investigation of serious crime. From this information, the RAI will be able to inform policy and practice, and identify gaps in specific topic areas and types of research design. Based on the results, the RAI may commission Rapid Evidence Assessments, Systematic Reviews or briefings according to the know availability of knowledge. This literature search will complement a similar review conducted into volume crime investigations (covering acquisitive crime) in 2005.

To guide the literature search, the RAI proposed the following questions:

1. What are the processes by which serious crime is investigated and do these vary by crime type?

2. What are the strengths and weaknesses within the investigative process in terms of the successful detection of crime?

3. What are the aspects of serious crime investigations that effectively and efficiently contribute to the detection (and conviction) of serious crime and does this vary with crime type?

The RAI acknowledged that these research questions may need to be refined as the search strategy developed.
1.2. Project Deliverables

This report describes the search strategy, presents the results of the systematic search and provides the RAI and other scholars with a ‘bank’ of literature on serious crime to assist with further research. The main goal of the systematic search was to use an objective and transparent approach to create a database of relevant literature that could be replicated, or supplemented, in the future. In addition, the following outcomes were considered central to the success of the project.

- Develop a search strategy in collaboration with the RAI that would address the research questions.
- Identify databases that hold relevant literature.
- Create a coding framework that would enable the RAI to interrogate the database to answer specific questions.
- Conduct a systematic search of databases using the devised search strategy.
- Record results in an electronic database using universally accessible software to enable easy interrogation of the data.
- Produce a reference library of relevant literature using an accessible referencing software package that would allow the RAI to cite documents in future reports and allow for flexibility in terms of referencing styles (e.g. APA, Harvard, Annotated).

1.3. Report Structure

The structure of the technical report is as follows:

Section 2: Research Methods. The methods section provides a detailed description of how the search strategy was developed, (e.g. keywords, coding framework, piloting), the identification of data sources, recruitment and training of researchers, and data cleaning processes. The section concludes with a description of how the results of the searches were compiled and organised in order to assist with the interrogation of the systematic search data.
Section 3: Results. This section summarises search results, highlighting critical findings such as the most effective search terms and databases. In addition, the results propose how to best utilise the database of over 17,471 records retrieved from the comprehensive search of the serious crime investigation literature.

Section 4: Conclusion. This section summarises the main findings of the systematic search and includes recommendations for improving the search strategy for future research.

Section 5: References of relevant literature.

Section 6: Appendices. The research team developed valuable guides for searching selected electronic resources (e.g. Cambridge Scientific Abstracts, Proquest etc.) as well as coding instructions. These documents are likely to be useful to the RAI and other scholars when conducting searches in the future.
2. Methodology

The consistent and replicable search methodology was devised that incorporated the following process:

1. Determine search parameters, including inclusions and exclusions.
2. Identify databases (with an emphasis on electronic sources) that would capture relevant material.
3. Devise a list of keywords that will identify publications relevant to the research questions.
4. Determine keyword combinations and search fields.
5. Develop process for coding relevant material.
6. Create database for recording literature of relevance.
7. Create library for recording abstracts and references of relevant material.
8. Define search and recording procedure.
9. Train staff and conduct inter-rater reliability to optimise consistent coding.
10. Conduct searches and categorise studies on the basis of a review of the abstract.
11. Merge individual search results into one comprehensive database
12. Review selected material and ‘clean’ data to ensure consistency.

2.1. Search parameters, inclusions and exclusions

The RAI provided the following research questions to guide the literature search:

1. What are the processes by which serious crime is investigated and do these vary by crime type?
2. What are the strengths and weaknesses within the investigative process in terms of the successful detection of crime?
3. What are the aspects of serious crime investigations that effectively and efficiently contribute to the detection (and conviction) of serious crime and does this vary with crime type?

The investigation process was defined as that process that leads to the arrest of an offender. Clearly, from the research questions, the RAI were interested in formulating an understanding of investigative processes in general as well as
those components of these processes that contributed to successful detection and conviction of serious crime.

From these broad parameters, we determined two key constructs: (1) serious crime, and (2) investigation process. It was then important to define and operationalise these key constructs.

The Home Office Counting Rules for Recorded Crime – Violence Against the Person\(^1\) and the Home Office Counting Rules for Recorded Crime – Sexual Offences\(^2\) served as the reference point to define and operationalise the “serious crime” construct. Using these, the Project Team and RAI negotiated those offences that were to be included in the study. The following offence types were explicitly excluded from the study:

1. Corporate Manslaughter
2. Robbery\(^3\)
3. Death or injury caused by motor vehicle accident

The finalised offence type list is as follows:

1. Murder
2. Manslaughter
3. Infanticide
4. Wounding (including Torture, Grievous Bodily Harm, Assault)
5. Rape
6. Sexual assault

For a variety of reasons, the Project Team and RAI also excluded several components of the investigative process from the search. Excluded components were:

---

1. Case screening (i.e., the decision to investigate or not investigate an alleged offence);
2. Crime scene assessment and forensic science more generally;
3. Profiling (i.e., psychological or behavioural profiling, case linkage or analysis);
4. Witness management (i.e., relating to witness protection initiatives);
5. Post-charge management (i.e., record management); and

2.2. Database Identification

Together, The CEPS and RAI Project Teams generated an initial list of social science databases that were to be considered for inclusion in the review. The databases were grouped into three categories: (1) general online databases; (2) agency databases; (3) library catalogues. Table 1 shows those databases on this initial list.

Table 1 – Initial database list

<table>
<thead>
<tr>
<th>Database category</th>
<th>Database</th>
<th>Sub-database</th>
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<tbody>
<tr>
<td>General online databases</td>
<td>CSA</td>
<td>Criminal Justice Abstracts</td>
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<td>Sociological Abstracts</td>
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<td>SAGE Criminology</td>
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<td>SAGE Sociology</td>
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<td>SAGE Political Science</td>
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<td>Informit</td>
<td>Australian Federal Police Digest</td>
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<td></td>
<td>Ingenta Connect</td>
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<td></td>
<td>ProQuest</td>
<td>ProQuest - Dissertations and Theses</td>
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<td></td>
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<td>ProQuest - Psychological Journals</td>
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<td></td>
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<td>ProQuest - Social Science Journals</td>
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<td>ProQuest - Legal Module</td>
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<td>Ovid</td>
<td>PsycEXTRA</td>
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<td>PsycINFO</td>
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<td></td>
<td>Web of Knowledge</td>
<td>Web of Science – Arts and Humanities Citation Index</td>
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<td></td>
<td></td>
<td>Web of Science - Social Sciences Citation Index</td>
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<tr>
<td></td>
<td>Networked Digital Library of Theses and Dissertations</td>
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<tr>
<td></td>
<td>National Criminal Justice Reference Service (NCJRS)</td>
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<td></td>
<td>Science Direct</td>
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<td>Database category</td>
<td>Database</td>
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<td></td>
<td>Taylor and Francis Journals (via Informaworld)</td>
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<td></td>
<td>Arts and Humanities Citation Index</td>
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<td></td>
<td>Web of Science</td>
<td></td>
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<tr>
<td></td>
<td>WileyInterscience</td>
<td></td>
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<tr>
<td>Agency databases</td>
<td>Scottish Institute for Policing Research</td>
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<tr>
<td></td>
<td>Association of Police Authorities</td>
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<td></td>
<td>Home Office</td>
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<td></td>
<td>National Institute of Justice</td>
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<td></td>
<td>Her Majesty's Inspectorate of Constabulary HMIC</td>
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<tr>
<td></td>
<td>Association of Police Authorities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jill Dando Institute of Crime Science</td>
<td></td>
</tr>
<tr>
<td></td>
<td>National Police Library via NPIA</td>
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</tr>
<tr>
<td>Library catalogues</td>
<td>Cambridge University Library &amp; Dependent Libraries Catalogue</td>
<td></td>
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<tr>
<td></td>
<td>University of Pennsylvania</td>
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</tbody>
</table>

These databases were examined to identify any unnecessary duplication across databases. This analysis was completed by undertaking a comparison of the source content of each database. The content of each database was accessed either from information provided on the website or by contacting the provider directly. Where it was unreasonable to compare individual entries (for example, some databases had more than 7000 subscribed journals), publisher lists were compared. Where only individual sources were available, these were entered into an excel spreadsheet and compared with other databases using the find function. This process could have been improved using the 2007 version of Excel as it has a duplicates feature not in the 2003 version, but this software was not available at the work site. The content comparison of each database revealed significant duplication. The exclusions are summarised below, each with a rationale.
### Table 2 - Modifications to Initial Database List

<table>
<thead>
<tr>
<th>Modification</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eliminations</strong></td>
<td></td>
</tr>
<tr>
<td>NCJRS and NIJ</td>
<td>The content found in NCJRS and NIJ is captured by other databases. Ovid’s PsycEXTRA captures the NCJRS and NIJ gray literature, while a combination of CSA, Informit, ProQuest, and Ingenta, capture the relevant journals that NCJRS subscribe to.</td>
</tr>
<tr>
<td>Jill Dando Institute of Crime Science</td>
<td>The research articles and monographs, and crime science series books listed on the site are captured by the academic databases used.</td>
</tr>
<tr>
<td>Informaworld (Taylor and Francis)</td>
<td>All Taylor and Francis journals are captured by Ingenta.</td>
</tr>
<tr>
<td>Networked Digital Library of Theses and Dissertations (NDLTD)</td>
<td>This database is a project managed by Virginia Tech. It is not an extensive database of dissertations with only 13,881 entries. ProQuest – Dissertations and Theses is the most comprehensive database of its kind in the world, with 2.4 million entries.</td>
</tr>
<tr>
<td>Home Office</td>
<td>Home Office publications are captured by PsycEXTRA and CSA.</td>
</tr>
<tr>
<td>PsycARTICLES</td>
<td>All PsycARTICLES records are captured by PsycINFO.</td>
</tr>
<tr>
<td>Science Direct</td>
<td>The non physical science publishers/publications of relevance to the serious crime review are listed below, as is where they are captured elsewhere in the search strategy.</td>
</tr>
<tr>
<td></td>
<td>- Academic Press is captured by Ingenta</td>
</tr>
<tr>
<td></td>
<td>- PsycARTICLES is captured by Ovid</td>
</tr>
<tr>
<td></td>
<td>- Elsevier is captured by Ingenta</td>
</tr>
<tr>
<td></td>
<td>- Pergamon is part of Elsevier so captured by Ingenta</td>
</tr>
<tr>
<td></td>
<td>- JAI Press is part of Emerald Publishing Group so captured by Ingenta</td>
</tr>
<tr>
<td>Wiley Interscience</td>
<td>Wiley Interscience (also known as Blackwell Publishing) is captured by Ingenta.</td>
</tr>
<tr>
<td>Science Citation Index</td>
<td>Pilot searches on the Science Citation Index reveal that it delivers records related to forensic science, which is an exclusion of the project. Records that are relevant to the project within the SCI are duplicated in either the Arts and Humanities Citation Index or Social Science Citation Index of Web of Science. Removing this sub-database substantially reduces the amount of exclusions for Web of Science without losing relevant material.</td>
</tr>
<tr>
<td>Her Majesty’s Inspectorate of Constabulary</td>
<td>Publications from this site are captured in PsycEXTRA as HMIC is a division of the Home Office. Pilot searches in PsycEXTRA confirm this.</td>
</tr>
<tr>
<td>University of Pennsylvania</td>
<td>Given that the University of Cambridge is a copyright library, and the National Policing Library will be searched, the inclusion of the University of Pennsylvania catalogue would cause unnecessary duplication.</td>
</tr>
<tr>
<td><strong>Additions</strong></td>
<td></td>
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<tr>
<td>ProQuest Legal Module</td>
<td>Include as a sub-database in the ProQuest search.</td>
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Following this consolidation process, the following databases were included in the review.

Table 3 - Review Databases and Sub-Databases

<table>
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<th>Database</th>
<th>Data Entry Name</th>
<th>Sub-database</th>
<th>Data Entry Name</th>
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<tbody>
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<td>Cambridge Scientific Abstracts</td>
<td>CSA</td>
<td>Criminal Justice Abstracts</td>
<td>CJA</td>
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<td>Sociological Abstracts</td>
<td>SOC</td>
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<td>SAGECRIM</td>
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<td>CINCH Criminology</td>
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<tr>
<td>Ingenta Connect</td>
<td>Ingenta</td>
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<td>PsycINFO</td>
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<td>WOK</td>
<td>Web of Science – Arts and Humanities Citation Index</td>
<td>A&amp;HCI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Web of Science - Social Sciences Citation Index</td>
<td>SSCI</td>
</tr>
<tr>
<td>Scottish Institute for Policing Research</td>
<td>SIPR</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Association of Police Authorities</td>
<td>APA</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>National Police Library via NPIA</td>
<td>NPL-NPIA</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cambridge University Library &amp; Dependent Libraries Catalogue</td>
<td>CUL</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

2.3.  Keywords and piloting

Keywords, or search terms, are critical to developing a search strategy that will elicit relevant information in a timely manner. The research team spent a considerable amount of time conceptualising and piloting search terms. This section describes the two phases used to arrive at the final set of keywords. The first phase focused on determining the appropriate keyword structure and phase two focused on refining the keywords.

It should be noted that any compound terms (e.g., criminal justice; crime scene) are always considered as a single term and entered into searches in inverted commas (i.e., “criminal justice”). This strategy ensures that the database
searches for the entire term rather than “criminal” AND “justice”, which would clearly produce very different results.

2.3.1. **Phase One: Determining the keyword structure**

Our starting point was to develop a search strategy that would identify (a) quality publications relevant to (b) police (c) investigation of serious crime.

To give the search strategy some structure, we separated these broad concepts into tiers as follows:

- Tier One: Research orientation.
- Tier Two: Policing orientation.
- Tier Three: Investigation and investigative process.

The following section outlines the process used to generate a preliminary list of keywords. It should be noted that the following searches were quite rudimentary. These basic pilots were necessary to confirm the relative merit of the search parameters and tiering structure.

**Tier One: Research Orientation**

We were interested to develop a search strategy that would identify quality publications that were based on research, and hypothesised that the inclusion of terms such as *research*, *empirical*, *evaluation* and *study* would help to target the search and reduce the number of exclusions. We tested this assumption by conducting a series of simple pilots in PSYCINFO. The results of these pilots are outlined in
Table 4.

From this table, it is apparent that the inclusion of the research orientation search terms does produce a more targeted, high-quality return. With the exception of the term *evaluation*, all research-oriented terms refined the search and increased the inclusion rate for all searches.
Table 4 - Pilot of Research Orientation Concept

<table>
<thead>
<tr>
<th>Search Keywords [1970 - current]</th>
<th>Hits</th>
<th>Inclusions %</th>
<th>Exclusions %</th>
</tr>
</thead>
<tbody>
<tr>
<td>police (ab) AND investigation (ab)</td>
<td>360</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>research (ab) AND police (ab) AND investigation (ab)</td>
<td>112</td>
<td>80</td>
<td>20</td>
</tr>
<tr>
<td>Empirical (ab) AND police (ab) AND investigation (ab)</td>
<td>29</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Evaluation (ab) AND police (ab) AND investigation (ab)</td>
<td>15</td>
<td>15</td>
<td>85</td>
</tr>
<tr>
<td>Study (ab) AND police (ab) AND investigation (ab)</td>
<td>127</td>
<td>40</td>
<td>60</td>
</tr>
</tbody>
</table>

Note: For each search, only the first 20 items were reviewed.

Tier Two: Policing Orientation

It was also important to restrict our search to police investigations. An initial test of the term *investigation* returned varied results that did not relate to policing or law enforcement (e.g., medical literature). Consequently, we ran a series of simple pilots in PSYCINFO to test keywords relating to policing. The results of these pilots are outlined in Table 5.

From Table 5, it is clear that the terms *police* and *law enforcement* produced reasonable hits and inclusion rates. However, the inclusions for *criminal justice* were very low and this term was eliminated from the review.

Table 5 - Pilot of Policing Orientation Concept

<table>
<thead>
<tr>
<th>Search Keywords [1970 - current]</th>
<th>Hits</th>
<th>Inclusions %</th>
<th>Exclusions %</th>
</tr>
</thead>
<tbody>
<tr>
<td>research (ab) AND investigation (ab)</td>
<td>11,650</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>research (ab) AND police (ab) AND investigation (ab)</td>
<td>112</td>
<td>65</td>
<td>35</td>
</tr>
<tr>
<td>research (ab) AND law enforcement (ab) AND investigation (ab)</td>
<td>41</td>
<td>65</td>
<td>35</td>
</tr>
<tr>
<td>research (ab) AND criminal justice (ab) AND investigation (ab)</td>
<td>138</td>
<td>10</td>
<td>90</td>
</tr>
</tbody>
</table>

Note: For each search, only the first 20 items were reviewed.

Tier Three: Investigation and Investigative Process

Despite the original intention to capture all investigative terms in Tier Three, it became apparent that the search strategy needed to distinguish between high-level, global terms that refer to the investigative process to investigation more generally (i.e., *investigation, investigative*) and more specific keywords related to components of the investigative process (e.g., scene, intelligence, composites) or organisational units (e.g., squad,
taskforce) that are often established to run investigations. Subsequently, it was necessary to split this tier into two. Tier Three would include global investigative terms and Tier Four would include specific investigative terms.

Based on our understanding of the investigative process, we drafted a comprehensive list of global and specific investigative keywords. This comprehensive list, which consisted of 166 keywords, was then subject to a number of filters. The CEPS and RAI Project Teams then reviewed this comprehensive list in light of the project goals and predetermined inclusions and exclusions. This process reduced the number of investigative keywords to 32.

Table 6 outlines the keyword structure and preliminary list of keywords as they stood at the conclusion of this first phase.

<table>
<thead>
<tr>
<th>Tier</th>
<th>Number</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier One: Research-Orientation</td>
<td>4</td>
<td>research; empirical; evaluation; study.</td>
</tr>
<tr>
<td>Tier Two: Policing-Orientation</td>
<td>2</td>
<td>policing; “law enforcement”</td>
</tr>
<tr>
<td>Tier Three: Global Investigation</td>
<td>2</td>
<td>investigation; investigative</td>
</tr>
<tr>
<td>Tier Four: Specific Investigation</td>
<td>22</td>
<td>first response; initial response; call handling; initial contact; crime screening; scene; composites; intelligence; informant; surveillance; evidence collection; evidence gathering; house-to-house; identification parades; suspect; interrogation; identification; interviewing; suspect handling; suspect management; proactive; solvability</td>
</tr>
</tbody>
</table>

The following section discusses the process used to refine the Tier One, Three and Four keywords.

2.3.2. Phase Two: Refining keywords

**Tier One: Research Orientation**

Having established the benefits of including research-oriented keywords, it was then important to determine if the inclusion of all four terms resulted in any unnecessary duplication. Using PsycINFO, and altering only Tier One keywords, we examined the number of duplicates in the first 20 records for
each search. Table 7 outlines the results of a Tier One + Tier Two + Tier Three search whereas Table 8 shows the results of a Tier One + Tier Two + Tier Four search.

Table 7 shows that 39 records were retrieved for the search [research (ab) AND police (ab) AND detection (ab)]. Moving across this first row in the table, there were no duplicates in the those records resulting from an evaluation search, 5 percent of the research records were found in records resulting from an empirical search, and 45 percent of the research records were also found in records resulting from a study search.

<table>
<thead>
<tr>
<th>Search Keywords [1970 – current]</th>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Tier 3</th>
<th>Tier 4</th>
<th>Hits</th>
<th>Res Dup%</th>
<th>Eval Dup%</th>
<th>Emp Dup%</th>
<th>Study Dup%</th>
</tr>
</thead>
<tbody>
<tr>
<td>research</td>
<td>police</td>
<td>detection</td>
<td>-</td>
<td>-</td>
<td>39</td>
<td>-</td>
<td>0</td>
<td>5</td>
<td>45</td>
</tr>
<tr>
<td>evaluation</td>
<td>police</td>
<td>detection</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>empirical</td>
<td>police</td>
<td>detection</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>66</td>
<td>0</td>
<td>-</td>
<td>33</td>
</tr>
<tr>
<td>study</td>
<td>police</td>
<td>detection</td>
<td>-</td>
<td>-</td>
<td>45</td>
<td>45</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 8 - Research Orientation Keyword Duplication Pilot (Tier 1 & 2 & 4)

<table>
<thead>
<tr>
<th>Search Keywords [1970 – current]</th>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Tier 3 All fields</th>
<th>Tier 4</th>
<th>Hits</th>
<th>Res Dup%</th>
<th>Eval Dup%</th>
<th>Emp Dup%</th>
<th>Study Dup%</th>
</tr>
</thead>
<tbody>
<tr>
<td>research</td>
<td>police</td>
<td>-</td>
<td>suspect</td>
<td>-</td>
<td>39</td>
<td>-</td>
<td>0</td>
<td>5</td>
<td>45</td>
</tr>
<tr>
<td>evaluation</td>
<td>police</td>
<td>-</td>
<td>suspect</td>
<td>-</td>
<td>5</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>empirical</td>
<td>police</td>
<td>-</td>
<td>suspect</td>
<td>-</td>
<td>3</td>
<td>66</td>
<td>0</td>
<td>-</td>
<td>33</td>
</tr>
<tr>
<td>study</td>
<td>police</td>
<td>-</td>
<td>suspect</td>
<td>-</td>
<td>45</td>
<td>45</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 9 and Table 10 present the results of these duplication pilots in a different way by identifying the percentage of records in each search that were not duplicated elsewhere. These results highlight the value of each keyword in terms of potential data lost if the word were to be excluded from the search strategy. For the search [research (ab) AND police (ab) AND detection (ab)], 45 percent of records were unique to that search, that is, they were not found in any of the other searches in the table.
The results demonstrated that all four key words were required as there were significant proportions of the literature unique to each research focus keyword. This was the case for both Tier Three and Tier Four searches.

**Table 9 - Research Orientation Keyword Duplication Pilot - Unique (Tier 1 & 2 & 3)**

<table>
<thead>
<tr>
<th>Search Keywords [1970 – current]</th>
<th>Tier 1 Abstract</th>
<th>Tier 2 Abstract</th>
<th>Tier 3 Abstract</th>
<th>Tier 4</th>
<th>Unique Records %</th>
</tr>
</thead>
<tbody>
<tr>
<td>research</td>
<td>police</td>
<td>detection</td>
<td>-</td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>evaluation</td>
<td>police</td>
<td>detection</td>
<td>-</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>empirical</td>
<td>police</td>
<td>detection</td>
<td>-</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>study</td>
<td>police</td>
<td>detection</td>
<td>-</td>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>

**Table 10 - Research Orientation Keyword Duplication Pilot - Unique Records (Tier 1 & 2 & 4)**

<table>
<thead>
<tr>
<th>Search Keywords [1970 – current]</th>
<th>Tier 1 Abstract</th>
<th>Tier 2 Abstract</th>
<th>Tier 3</th>
<th>Tier 4 All fields</th>
<th>Unique Records %</th>
</tr>
</thead>
<tbody>
<tr>
<td>research</td>
<td>police</td>
<td>-</td>
<td>suspect</td>
<td></td>
<td>55</td>
</tr>
<tr>
<td>evaluation</td>
<td>police</td>
<td>-</td>
<td>suspect</td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>empirical</td>
<td>police</td>
<td>-</td>
<td>suspect</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>study</td>
<td>police</td>
<td>-</td>
<td>suspect</td>
<td></td>
<td>70</td>
</tr>
</tbody>
</table>

**Tier Three: Global Investigation Keywords**

The terms *investigation* and *investigative* were retained in Tier Three. Pilots of the terms *detection* and *interview* (not displayed here) indicated that these terms, while components of the investigative process and technically part of Tier Four, were more appropriately searched in the abstract search field (see section 2.4). Consequently, these terms were included in Tier Three.

**Tier Four: Specific Investigation Keywords**

The specific investigation keywords were refined by consolidating those compound keywords that incorporated the same substantive term. For instance, searching for the keyword “evidence” will elicit records relating to “evidence collection” and “evidence gathering”. Using this strategy, the specific investigation keywords were reduced from 22 to 19 discrete terms.
Table 11 - Finalised Keyword Structure and Keywords

<table>
<thead>
<tr>
<th>Tier</th>
<th>Number</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier One: Research-Orientation</td>
<td>4</td>
<td>research; empirical; evaluation; study.</td>
</tr>
<tr>
<td>Tier Two: Policing-Orientation</td>
<td>2</td>
<td>policing; law enforcement</td>
</tr>
<tr>
<td>Tier Three: Global Investigation</td>
<td>4</td>
<td>investigation; investigative; detection; interview</td>
</tr>
<tr>
<td>Tier Four: Specific Investigation</td>
<td>22</td>
<td>solvability; first response; initial response; call handling; initial contact; crime screening; scene; composites; intelligence; informant; surveillance; evidence; house-to-house; suspect; interrogation; identification; proactive; taskforce; squad</td>
</tr>
</tbody>
</table>

2.4. Keyword Combinations and Search Fields

Having determined the keywords that were to be included in the review, it was then necessary to establish an appropriate and efficient method for conducting the searches. As previously discussed, the overriding goal of the search strategy was to identify (a) quality publications relevant to (b) police (c) investigation of serious crime. This means that the following search combinations would be required:

- Tier One AND Tier Two AND Tier Three
- Tier One AND Tier Two AND Tier Four

It was not logical to include Tiers Three and Four in a single search.

The search field dictates where the database will search for the selected keywords. An “abstract” search only looks for keywords in the citation and abstract, whereas an “all fields” search looks for keywords throughout the document and in bibliographic information. We piloted a number of searches to determine the optimal search field for each Tier. Our goal was to generate inclusion rates of approaching 80 percent. From Table 12, an abstract search produces much more targeted results, with much higher inclusion rates. A closer inspection of the results showed that the “all fields” search takes the search keywords out of context, returning predominantly non-policing applications, despite the inclusion of “police” in the search.
Table 12 - Search Fields Pilot (Tier 1 & 2 & 3)

<table>
<thead>
<tr>
<th>Database</th>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Tier 3</th>
<th>Tier 4</th>
<th>Hits</th>
<th>Inclusion Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>PyscINFO</td>
<td>All fields</td>
<td>All fields</td>
<td>All fields</td>
<td>3,374</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abstract</td>
<td>Abstract</td>
<td>Abstract</td>
<td>109</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>CINCH</td>
<td>All fields</td>
<td>All fields</td>
<td>All fields</td>
<td>130</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abstract</td>
<td>Abstract</td>
<td>All fields</td>
<td>41</td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

It was then important to test the use of the “abstract” search field on more obscure words (i.e., those in Tier Four), the rationale being that these more specific terms may not appear in the citation or abstract, but may be mentioned in other places in the publication. Retaining the “abstract” search field for Tiers One, Two and Three, we manipulated the search field for Tier Four only. Table 13 shows that the use of the “all fields” search field for Tier Four keywords generally produces more results without reducing the inclusion rate.

Table 13 - Search Fields Pilot (Tier 1 & 2 & 4)

<table>
<thead>
<tr>
<th>Database</th>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Tier 3</th>
<th>Tier 4</th>
<th>Hits</th>
<th>Inclusion Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>PyscINFO</td>
<td>research ab</td>
<td>police ab</td>
<td>-</td>
<td>suspect ab</td>
<td>49</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>research ab</td>
<td>police ab</td>
<td>-</td>
<td>suspect af</td>
<td>106</td>
<td>70</td>
</tr>
<tr>
<td>CINCH</td>
<td>research ab</td>
<td>police ab</td>
<td>-</td>
<td>suspect ab</td>
<td>130</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>research ab</td>
<td>police ab</td>
<td>-</td>
<td>suspect af</td>
<td>41</td>
<td>60</td>
</tr>
<tr>
<td>PyscINFO</td>
<td>study ab</td>
<td>police ab</td>
<td>-</td>
<td>composite ab</td>
<td>14</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>study ab</td>
<td>police ab</td>
<td>-</td>
<td>composite af</td>
<td>22</td>
<td>45</td>
</tr>
<tr>
<td>PyscINFO</td>
<td>empirical ab</td>
<td>police ab</td>
<td>-</td>
<td>identification ab</td>
<td>16</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>empirical ab</td>
<td>police ab</td>
<td>-</td>
<td>identification af</td>
<td>27</td>
<td>78</td>
</tr>
<tr>
<td>PyscINFO</td>
<td>research ab</td>
<td>police ab</td>
<td>-</td>
<td>solvability ab</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>research ab</td>
<td>police ab</td>
<td>-</td>
<td>solvability af</td>
<td>1</td>
<td>100</td>
</tr>
</tbody>
</table>

In summary, the following keyword combinations and search fields were used in this review:

- Tier One (abstract) AND Tier Two (abstract) AND Tier Three (abstract).
- Tier One (abstract) AND Tier Two (abstract) AND Tier Four (all fields).

2.5. Coding

Two coding phases were undertaken during the search, the first was conducted to determine whether a publication was eligible for inclusion in the review, the second to code the nature of the research for those included publications.
2.5.1. **Search information**

Search information recorded the search parameters. This information guided the search and also provided the ability to easily track search results and cross-check records in the data cleaning phase. Detailed recording of the search parameters ensures that the search can be replicated in the future. The following information was captured in relation to the specific search:

- **Search Date.** As new material is constantly being added to each electronic database, to cross-check results we would need to know when the search had been completed.
- **Researcher.** Searchers were responsible for a given database or selection of keywords within a database. It was important to know which researcher had conducted each given search.
- **Database and sub-database used.** This information was necessary to determine those databases and sub-databases that were particularly relevant to answering the research questions.
- **Keywords.** The search term combinations, drawn from the relevant tier, were specified. Once again, this information would be analysed to determine which keywords and keyword combinations produced the most number of relevant results.
- **Search Fields.** ‘Abstract’ and ‘all fields’ search fields were used in this search.

2.5.2. **Eligibility coding**

While the search terms were crafted to elicit appropriate publications from the databases, no search strategy will produce perfect results. Furthermore, the RAI excluded certain categories of serious crime and components of the investigative process. These exclusions are described in
Table 14. Given the number and complexity of these exclusions, it was not possible to incorporate the exclusions in the search parameters (e.g., search for “investigation NOT domestic violence”).
Table 14 - Exclusion codes

<table>
<thead>
<tr>
<th>Exclusion Code</th>
<th>Details</th>
</tr>
</thead>
</table>
| Not serious crime (NSC) | Publications that did not relate to the investigation of the following crimes were excluded from the search:  
- Murder  
- Manslaughter  
- Attempted Murder  
- Infanticide  
- Wounding  
- Rape  
- Serious Sexual Assault  
Where the abstract did not state a particular crime type, publications were included. |
| Serious crime, but excluded (SCE) | The following serious crimes were excluded from the search:  
- Arson  
- Robbery  
- Murder or Manslaughter as a result of a motor vehicle  
- Corporate Manslaughter  
- Domestic violence  
- Gang-related offences  
- Terrorist offences. |
| Not investigative process (NIP) | Publications that did not relate to the investigative process were excluded. |
| Investigative process, but excluded (IPE) | The following components of the investigative process were excluded from this review:  
- Forensic Science, including to all forensic science aspects of criminal investigation, e.g. DNA, fingerprinting, ballistics etc.  
- Profiling - refers to offender profiling, also called behavioral, psychological, personality, criminal profiling. Profiling processes of case linkage or linkage analysis are also to be excluded, as are modus operandi, signature, victimology, and crime scene reconstruction. Databases that assist with managing offence/offender information such as VICLAS and VICAP are also excluded.  
- Witness Management - refers to interviewing of witnesses and witness protection programs. This includes interviewing victims.  
- Post-charge Management - refers to the way records are managed once charges have been laid.  
- Trial Preparation - exclude all literature discussing how law enforcement prepare for trial. |

The decision to include or exclude a publication from the search was based on a review of the abstract. After running the search, researchers printed all records. Working with this hard copy printout, researchers marked those publications that were eligible for inclusion, and coded those publications that were ineligible. After reviewing all records in the search, researchers recorded the total number of records, the total number of exclusions and the number of publications for each exclusion code.

Ineligible records were not included in the literature database.
2.5.3. **Research coding**

The RAI’s research questions were very broad, requiring literature on investigative practices relevant to a number of crime types. Research coding captured information relevant to the research orientation of publications. This coding would enable the RAI to search the database to retrieve publications relevant to a certain criteria at a later date. For example, the RAI may be interested in retrieving all publications relating to murder investigations.

Eligible publications were coded to capture information relevant to:

- **Research design.** Qualitative, quantitative, mixed methods, not applicable or unknown.
- **Primary Method.** Experimental (e.g. randomised controlled trial), survey, observations, interviews, case studies, other, and not applicable.
- **Secondary Method.** Where multiple methods had been used.
- **Research questions.** Whether the publication related to the process of investigation, the outcome of an investigation, or both.
- **Offence type.** Whether the publication related to the investigation of Murder, Manslaughter, Attempted Murder, Infanticide, Wounding, Rape, Serious Sexual Assault, Generic (no offence type mentioned), other, not applicable.
- **Outcomes.** Whether the publication related to the outcome of the investigation, specifically arrest, charge, conviction, failure of the investigative process, other, not applicable. investigation of Murder, Manslaughter, Attempted Murder, Infanticide, Wounding, Rape, Serious Sexual Assault, Generic (no offence type mentioned), other, not applicable.
- **Region.** The geographic region within which the research was conducted.
- **Population.** The participants who were the target of the research, for example, offenders, victims, criminal justice officials, civilians.

Where the research referred to an excluded term, but also related to an included term, the research was included.
2.5.4. Reference coding

A key deliverable of the project was to provide the RAI with a complete reference and corresponding abstract to enable the future retrievable of publications of interest. Reference coding included: (1) Full reference; (2) Abstract; and (3) Link to PDF or URL where available.

A detailed coding instruction sheet is included Appendix A. More detail on training generally is presented in Section 2.9.3.

2.6. Literature Database

The Literature Database was designed to capture the information required by the RAI. The RAI’s minimum requirements were:

- author
- date
- title
- year
- source
- database used
- a link to abstract/full text (if available).

A Literature Database was created for each database. The Literature Database included two separate datasheets: (1) SearchDatasheets; and (2) Eligible Records Datasheets.

Search datasheets were designed to record the searches conducted. In accordance with the RAI’s requirements, the search datasheets captured the date of the search, the initials of the searcher, the database searched, the search terms and any restrictions on the search (e.g., dates), the number of studies resulting from the search, the number of studies selected for inclusion in the research and any other comments (see
Figure 1). In addition to these basic requirements, the search datasheet also allocated a unique identifier for each search and coded the exclusions.
To ensure the integrity of the search strategy, the light grey component of the search datasheet was populated and controlled by the Senior Research Assistant. This reduced the possibility that research assistants might make an error in determining the appropriate search fields if the database could not perform the required search.

Eligible Records Datasheets were designed to record information for each eligible record. For completeness, Eligible Records Datasheets duplicated the search and identifier information that appeared on the Search Datasheets, but also recorded additional information on the research and reference details (see Figure 2). Records Datasheets were merged at the conclusion of the search process to create the comprehensive literature database. Issues relating to this database merger and data cleaning are discussed in a later section.

### Figure 2 - Eligible Records Datasheet template

<table>
<thead>
<tr>
<th>Record Number</th>
<th>Eligible</th>
<th>Sub Database</th>
<th>Design</th>
<th>Primary Method</th>
<th>Secondary Method</th>
<th>Research Question</th>
<th>Offence Type</th>
<th>Outcome</th>
<th>Region</th>
<th>Population</th>
<th>Reference Information</th>
<th>Reference Information</th>
<th>Link (to PDF or URL)</th>
<th>Abstract</th>
</tr>
</thead>
</table>

2.7. **Reference Database**

EndNote version12 (X2) was the software package used to record reference information. Some of the advantages of using EndNote include:

- Facility to present references in multiple styles (e.g. APA, Harvard, Annotated) or create a unique style to the user.
In many of the databases used, it was possible to import the citations from the searches directly into EndNote. At the conclusion of the search process, significant time was spent cleaning the EndNote database, specifically removing duplicate references and amending the information included in the reference. A single publication, when imported from different databases, can appear in EndNote multiple times, even when duplicate references are automatically extracted. This is because different databases often have different abstracts for a single publication, or the reference information is incomplete in one database as opposed to a full entry in another database. References are presented in APA fifth edition style.

2.8. Define procedure for completing searches

Prior to training staff and conducting searches, senior researchers reviewed a series of abstracts to discuss issues of eligibility and coding. Following this, the senior researcher conducted a Tier One, Two and Three search combination (research OR empirical OR evaluation OR study AND police AND investigation) in the Informit database. This search would later form the basis for training for research assistants and conducting an inter-rater test of reliability (see section 2.9). The senior researcher printed off results, completed the Search Datasheet and Eligible Records Datasheet, and imported eligible references into EndNote. A detailed, step-by-step instruction document was created from this process. This search and coding document is provided in Appendix B.

A document detailing database idiosyncrasies was also developed. In particular, the database instructions document provided information on:

- **Where to locate the database.** Some databases had to be accessed via the Griffith University library page whilst others had a weblink for general access.
- **Where and how to type in searches.** Senior researchers tested basic and advanced search options as well as the use of Boolean functions.
• **How to print off records.** Printing off references in abstracts in some databases was not self-evident and required some manipulation (e.g. copying and pasting documents into a word file).

• **Importing citations into EndNote.** Each database had a unique process for importing citations into the referencing software. In some cases text files had to be created to facilitate an import.

### 2.9. Recruitment, Training and Inter-rater Reliability

#### 2.9.1. Recruitment

In addition to the Senior Research Assistant (SRA) managing the project, six research assistants (RAs) were recruited. Minimum requirements included (1) proficiency in Excel, (2) experience in searching databases, and (3) completion or near completion of an undergraduate degree. Recruitment was targeted towards Psychology and Criminology honours and postgraduate students, preferably with an accompanying staff recommendation.

#### 2.9.2. Training Process

The training process was facilitated by a training document which provided an overview of the project’s research questions, search strategy, resources and skills necessary to participate, and search and coding instructions. The SRA went through the document with each RA individually, demonstrating procedures using Excel and EndNote. Where RAs were off campus, phone consultations were held. These discussions took approximately 30 minutes each.

The first two RAs were assigned what was initially thought to be an inter-rater reliability task. They were required to complete the process outlined in the training document for the first 50 records of a specified search. The products of this task were a completed Search Datasheet, Eligible Records Datasheet and an EndNote library. The SRA had completed the task herself, and inter-rater reliability was calculated by comparing the RAs results with those of the SRA. The SRA also checked the EndNote library and Excel spreadsheets for any other issues. Two issues emerged. Firstly, the results were not sufficient for inter-rater reliability indicating more training was required. Secondly, the time taken to
complete the process for 50 records was approximately 6 hours, and the issues identified in the last 20 records were not unique to those identified in the first 30. Subsequently, it was decided all RAs would complete a training task on 30 records almost halving the training task time. The results were compared with the coding of the SRA, and individual feedback was given in writing, followed up with an in person or telephone debriefing. Table 15 lists the time commitment required for the revised training process.

Table 15 - Time commitment for training process (30 records)

<table>
<thead>
<tr>
<th>Task</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAs to complete the training task</td>
<td>3</td>
</tr>
<tr>
<td>SRA to check the training task and prepare written feedback</td>
<td>1.5</td>
</tr>
<tr>
<td>RAs to read written feedback and generate questions for the debriefing session</td>
<td>0.5</td>
</tr>
<tr>
<td>Debriefing session with RA and SRA</td>
<td>2 (1 hour each)</td>
</tr>
<tr>
<td><strong>TOTAL TRAINING HOURS PER RA</strong></td>
<td><strong>7</strong></td>
</tr>
</tbody>
</table>

Including the longer training process for the first two RAs, and the SRA devising and completing the task, the training process is estimated to have taken 50 hours of active engagement. The training process was critical in identifying coding issues as reflected by the training document undergoing several iterations to address the issues raised by the coders. After all six RAs had completed the training process, the training document had evolved into a coding framework that would ensure acceptable levels of consistency. This was proven by the inter-rater reliability task results.

2.9.3. **Inter-rater Reliability**

Once the training debrief had occurred and the RA and SRA were confident to proceed, the inter-rater reliability (IRR) task was provided. RAs were required to complete the process for the first 20 records of a specified search. Agreement between RA results was marked against coding completed by the SRA. The results generally demonstrated sufficient inter-rater reliability (greater than 85% agreement) across three dimensions: (1) inclusions/exclusions correct, (2) exclusions coded correctly, and (3) research codes. One RA was removed from the project due to an overall IRR result of 73 percent. Of the remaining five RAs, three achieved acceptable levels (88%, 94%, 86%). Two RAs did not achieve sufficient inter-rater reliability on one dimension of the task; the exclusions
coding. These two coders were given a further exclusion coding task to complete based on the first 20 records of a specified search. Both succeeded in this additional task, raising their overall inter-rater result to acceptable levels (85% and 87%). The mean of the inter-rater reliability results of the five remaining coders was a reasonable 88 percent. Similar to the training task, the SRA prepared written feedback for each RA on their IRR results and a debriefing session was held before databases were assigned.

The time commitment required to complete the inter-rater reliability process is summarised in Table 16. In addition, two RAs completed an additional exclusion task on 20 records. The time commitment for this is outlined in Table 17.

### Table 16 - Time commitment for inter-rater reliability task (30 records)

<table>
<thead>
<tr>
<th>Task</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAs to complete the IRR task</td>
<td>2</td>
</tr>
<tr>
<td>SRA to check the IRR task and prepare written feedback</td>
<td>1</td>
</tr>
<tr>
<td>RAs to read written feedback and generate questions for the debriefing session</td>
<td>0.5</td>
</tr>
<tr>
<td>Debriefing session with RA and SRA</td>
<td>2 (1 hour each)</td>
</tr>
<tr>
<td>TOTAL IRR HOURS PER RA</td>
<td>5.5</td>
</tr>
<tr>
<td>TOTAL IRR HOURS (x 6 RAs)</td>
<td>33</td>
</tr>
</tbody>
</table>

### Table 17 - Time Commitment for Additional Exclusion Coding Task

<table>
<thead>
<tr>
<th>Task</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAs to complete the exclusion task</td>
<td>1</td>
</tr>
<tr>
<td>SRA to check the training task and prepare written feedback</td>
<td>0.5</td>
</tr>
<tr>
<td>RAs to read written feedback and generate questions for the debriefing session</td>
<td>0.25</td>
</tr>
<tr>
<td>Debriefing session with RA and SRA</td>
<td>0.5 (0.25 each)</td>
</tr>
<tr>
<td>TOTAL EXC TASK HOURS PER RA</td>
<td>2.25</td>
</tr>
<tr>
<td>TOTAL EXC TASK HOURS (x 2 RAs)</td>
<td>4.5</td>
</tr>
</tbody>
</table>

In total, the IRR process is estimated to have consumed almost 40 hours.

### 3. Results

This section provides results of the systematic search of serious crime investigations literature. The organisation of the results is as follows:

1. Database issues.
2. Cleaning and cross checking of search results.
3. Relevant literature.
4. Database results.
5. Keyword(s) combination results:
   a. Tier One AND Tier Two AND Tier Three.
   b. Tier One AND Tier Two AND Tier Three
6. Research information results:
   a. Design (e.g. the number of document using a quantitative design).
   b. Method (e.g. survey, case studies etc.).
   c. Research question.
   d. Agency.
   e. Outcome.
   f. Region.
   g. Population.
7. Most frequently cited literature.
8. Most frequently cited literature for each research question (top five across all search combinations).
9. Literature identifying a survey in methods.
10. Serious crime investigations literature over time.

3.1. Database issues

Researchers conducting database searches identified difficulties on a variety of issues including the display of records, printing of references and/or abstracts and importing citations into EndNote. This section describes some of the issues encountered within specified databases.

3.1.1. CSA

CSA can only print/save/export 200-225 records at a time. Where hits over 200 were encountered, the searcher needed to print in batches of 200. Researchers needed to keep track of the numbering so that, for example, record number 201 was not listed as 1 in the spreadsheet. In order to compile an Endnote library, references had to be save as txt* files and later imported into Endnote program. References belonging to searches which resulted in large numbers of hits could not be saved at the same time. Therefore, in some cases, references were imported in groups of 50.
3.1.2. **Ingenta**

Ingenta does not display the abstracts for each record. The searcher has to individually open each record, and copy and paste the abstract into a word document in order to have the information required to assess each publication. This process is very time consuming. In addition, it was not possible to import the abstracts into EndNote. References had to be manually inserted into the EndNote library. Researchers also experienced difficulties with regard to search sessions timing out. It would appear that searches resulting in a particularly large number of records were unable to be processed.

3.1.3. **Proquest**

There were a number of difficulties with this database which affected the efficiency of the searches. Specifically:

- The default number of records displayed on the results page is 10. This can be changed to 30 in the box in the lower right hand corner but this has to be done for each search.

- A maximum of 50 records can be exported, printed or saved. If there are more than 50 records, it is necessary to go to the My Research tab and clear all marked records and then go back to Results section to export the next 50 records and so forth. Whilst this additional step seems simple enough, repeating this action added considerable time to the processing of search results.

- When exporting results to the EndNote library, often the authors first and last names were transposed. These errors had to be (1) identified, and (2) manually changed. Additionally, the type of document was often incorrectly classified. For example, many journal articles were imported into EndNote as a ‘Film or Broadcast’. When this occurred, the reference type had to be changed manually in EndNote.

3.1.4. **NPL-NPIA**

CEPS researchers conducting this search were simultaneously involved in another systematic search into procedural justice. The procedural justice team encountered considerable difficulties with the NPL website, most critically an inability to reconcile the records in the Search Datasheet, Eligible Records Datasheet and EndNote library. The procedural justice team notified the NPL...
librarian of these issues, who confirmed these problems. These problems were unable to be addressed within the time frame for this project and, consequently, this database was abandoned.

3.1.5. Cambridge University Library and Dependant Libraries

The full tiered search strategy was not employed in the Cambridge library. The inclusion of the Tier One research terms was unsuccessful. Consequently, only Tier Two AND Tier Three, and Tier Two and Tier Four search combinations were used in this database. The search field ‘Keyword Anywhere’ was determined to be the most useful in generating relevant results.

Cambridge Library did not translate well into Endnote. All imported records required editing to ensure that the library complied with the APA 5th edition styling.

Cambridge Library does not provide abstracts. Consequently, no research coding was conducted on this dataset.

3.1.6. Web of Knowledge

Web of Knowledge did not report the specific sub-databases from which the document was retrieved, therefore, it was not possible to code this in the search results. A number of records were coded as ineligible on the basis that abstracts were not available. In addition, many references were printed in capitals, or had information missing which required manual rectification.

3.2. Cleaning and cross-checking of results

At the conclusion of the searches, Search Datasheets and Eligible Records Datasheets were incorporated into a single master Excel file. The Master Eligible Records worksheet included all eligible records, including duplicates. Prior to conducting the analyses, it was important to clean both the Search Datasheets and Eligible Records Datasheets to ensure that records were consistently entered. Inconsistencies would mean that a single record would appear multiple times in the database, inflating the total number of eligible records. The following activities were conducted as part of this cleaning process:
• A random list of search numbers was generated in Excel to cross-check the number of hits, within search duplicates and records generated for a selected database.

• The total number in the Master Search Datasheet (i.e., record totals for all searches) was cross-checked with the actual number of eligible records appearing in the Master Eligible Records Datasheet. This process was necessary to ensure that all records were accounted for.

• The total number of ineligible records was checked with the sum totals of the four ineligible codes.

• There were many reference discrepancies in the Master Eligible Records Datasheet. These were identified by sorting the file by (a) Reference; and (b) Author, to identify these discrepancies. Where discrepancies did occur, it was most often the result of the database providing different abstracts in relation to the same citation. Therefore, one researcher may have coded the method as ‘survey’ but another researcher coded the method as ‘unknown’. In such cases, the decision was made to code the record using the most available information.

• Similarly, some databases failed to provide the reference in APA 5th style, or the reference did not translate well to Excel. Each poorly formatted reference was manually identified and cross-checked with the Master Endnote Library.

At the conclusion of this process, we had created a datasheet that included single entries of eligible records. These records are referred to as the Unique Dataset.

An EndNote master library was created by importing the individual Endnote libraries from each database. Similar to the initial merger of the Excel files, the first iteration of the Master Endnote Library contained many duplicated. Endnote has the capacity to identify and delete duplicates. While this process was completed, duplicates remained because of the reference formatting idiosyncrasies of the various databases. Researchers manually examined the Master Endnote Library to identify and delete remaining duplicates. The next step was to ensure that the number of records in the Master Endnote Library reconciled with the number of records in the Unique Dataset. This was a lengthy process that required each dataset to be printed out and the reference lists
compared one by one. Finally, each Endnote record was reviewed to ensure it was formatted according to the APA 5th style.

3.3. Relevant literature

In total, 17,471 publications were identified, reviewed and coded over the course of the project. Of these, 2,046 records were coded as relevant to the research questions, and of these, 948 were unique records. This translates to a 12 percent rate of inclusion for relevant publication. While at first glance, this appears to be a very low rate, especially when the pilots were retrieving much higher rates, it is understandable given the breadth of content covered by the research questions. This issue is dealt with in more detail in the discussion and recommendations section. In isolation from this rate, the retrieval of 948 unique publications that relate to the research question and are based on research is an excellent outcome. The complete reference list is available in Appendix C.

Reasons for ineligibility records were coded. Table 18 shows that over half (52%) of the excluded records did not relate to the investigative process. Over one quarter (28%) were excluded because the article focused on a non-serious crime (although articles that did not mention a crime type were classed as eligible). CSA was the only database that automatically extracted duplicates from the output.

Table 18 - Reasons for ineligibility

<table>
<thead>
<tr>
<th>Reason</th>
<th>CSA</th>
<th>CUL*</th>
<th>Informit</th>
<th>Ingenta</th>
<th>Ovid</th>
<th>Proquest</th>
<th>WOK</th>
<th>Totals</th>
<th>Ineligible %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not investigative process</td>
<td>2423</td>
<td>221</td>
<td>332</td>
<td>107</td>
<td>718</td>
<td>3953</td>
<td>173</td>
<td>7927</td>
<td>52%</td>
</tr>
<tr>
<td>Not serious crime</td>
<td>1194</td>
<td>81</td>
<td>416</td>
<td>412</td>
<td>1257</td>
<td>287</td>
<td>596</td>
<td>4243</td>
<td>28%</td>
</tr>
<tr>
<td>Investigative process, but excluded</td>
<td>364</td>
<td>20</td>
<td>223</td>
<td>132</td>
<td>548</td>
<td>260</td>
<td>191</td>
<td>1738</td>
<td>11%</td>
</tr>
<tr>
<td>Serious crime, but excluded</td>
<td>412</td>
<td>41</td>
<td>181</td>
<td>47</td>
<td>305</td>
<td>98</td>
<td>56</td>
<td>1140</td>
<td>7%</td>
</tr>
<tr>
<td>Number of within search duplicates</td>
<td>277</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>277</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>9</td>
<td>0</td>
<td>24</td>
<td>44</td>
<td>0%</td>
</tr>
<tr>
<td>Total Number of Exclusions</td>
<td>4677</td>
<td>363</td>
<td>1152</td>
<td>702</td>
<td>2837</td>
<td>4598</td>
<td>1040</td>
<td>15369</td>
<td></td>
</tr>
<tr>
<td>Total Hits</td>
<td>5395</td>
<td>485</td>
<td>1369</td>
<td>913</td>
<td>3344</td>
<td>4676</td>
<td>1231</td>
<td>17413</td>
<td></td>
</tr>
<tr>
<td>% Total Exclusions</td>
<td>87%</td>
<td>75%</td>
<td>84%</td>
<td>77%</td>
<td>85%</td>
<td>98%</td>
<td>84%</td>
<td>88%</td>
<td>100%</td>
</tr>
</tbody>
</table>
### 3.4. Database results

An important objective of the systematic search was to assess the relative value of the databases in producing relevant literature. Table 19 details the total number of records retrieved, the number of eligible records (including duplicates across search terms) and the percentage of eligible records for the two search combinations. In addition, the table also provides a breakdown of the total results for each database, and the number of duplicate records and unique records within the database. It is important to note that Tier One terms were not included in the Cambridge search (refer to Section 3.1.1). The number of duplicate records was calculated by subtracting total unique records from total eligible records.

<table>
<thead>
<tr>
<th>Search Terms</th>
<th>CSA</th>
<th>Ingenta</th>
<th>Ovid</th>
<th>Proquest</th>
<th>WOK</th>
<th>APA</th>
<th>CUL*</th>
<th>SIPR</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1, 2 &amp; 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Records</td>
<td>2058</td>
<td>381</td>
<td>407</td>
<td>852</td>
<td>2400</td>
<td>400</td>
<td></td>
<td></td>
<td>6,729</td>
</tr>
<tr>
<td>Eligible Records</td>
<td>350</td>
<td>68</td>
<td>97</td>
<td>154</td>
<td>225</td>
<td>61</td>
<td></td>
<td></td>
<td>846</td>
</tr>
<tr>
<td>% Eligible Records</td>
<td>17%</td>
<td>18%</td>
<td>24%</td>
<td>18%</td>
<td>26%</td>
<td>N/A</td>
<td></td>
<td>N/A</td>
<td>13%</td>
</tr>
<tr>
<td>Tier 1, 2 &amp; 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Records</td>
<td>3337</td>
<td>998</td>
<td>508</td>
<td>2492</td>
<td>2276</td>
<td>831</td>
<td></td>
<td></td>
<td>10,684</td>
</tr>
<tr>
<td>Eligible Records</td>
<td>368</td>
<td>149</td>
<td>114</td>
<td>286</td>
<td>126</td>
<td>61</td>
<td></td>
<td></td>
<td>1,199</td>
</tr>
<tr>
<td>% Eligible Records</td>
<td>11%</td>
<td>15%</td>
<td>23%</td>
<td>14%</td>
<td>17%</td>
<td>24%</td>
<td></td>
<td>N/A</td>
<td>11%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Records</td>
<td>5395</td>
<td>1369</td>
<td>913</td>
<td>3344</td>
<td>4676</td>
<td>1231</td>
<td></td>
<td></td>
<td>17,471</td>
</tr>
<tr>
<td>Eligible Records</td>
<td>718</td>
<td>217</td>
<td>211</td>
<td>507</td>
<td>78</td>
<td>191</td>
<td>0</td>
<td>122</td>
<td>2,046</td>
</tr>
<tr>
<td>% Eligible Records</td>
<td>13%</td>
<td>16%</td>
<td>23%</td>
<td>15%</td>
<td>2%</td>
<td>16%</td>
<td>0%</td>
<td>25%</td>
<td>12%</td>
</tr>
<tr>
<td>Excluded Records</td>
<td>5044</td>
<td>1256</td>
<td>819</td>
<td>3145</td>
<td>4644</td>
<td>1148</td>
<td>42</td>
<td>411</td>
<td>16,523</td>
</tr>
<tr>
<td>Unique records</td>
<td>351</td>
<td>113</td>
<td>94</td>
<td>199</td>
<td>32</td>
<td>83</td>
<td>0</td>
<td>74</td>
<td>946</td>
</tr>
</tbody>
</table>

A total of 6,729 records were retrieved in relation to Tier One AND Tier Two AND Tier Three searches. Of these, 845 records were coded as eligible publications, giving an average rate of inclusion of 13 percent across all databases. The Cambridge Library provided the highest percentage of eligible records (26%) (although recall that the eligibility assessment was made purely on the title of the publication which may ultimately reduce the number of eligible publications) followed closely by Ingenta (24%). Proquest returned the highest number of records (N=2,400) with the least number of records identified as eligible (2%).

Tier One AND Tier Two AND Tier Four searches generated 10,684 records. Across all databases, 11 percent of these publications were eligible (N=1,199). Once again, the Cambridge Library produced the highest rate (24%) of eligible publications.
publications (N= 61). Ingenta retrieved a comparably low number of publications (N=506), but had an inclusion rate of 23 percent. Proquest returned the greatest number of hits (n=2,276) but only one percent of the records were recorded as eligible.

Overall, 17,471 records were retrieved across all of the databases, with only 12 percent (N=2,046) of records proving to be eligible. After eliminating duplicates, 948 unique references remained. Figure 3 shows the percentage of total eligible records by database.

Figure 3 - Percentage of total eligible records by database

3.4.1. Database discussion and recommendations

These results suggest that the Proquest database (which included social science, psychological and legal journals and dissertations) may not be sufficiently targeted to literature relating to the investigation of serious crime. Potentially the broad nature of the dissertation component (which cannot be segmented into topic areas) diluted the eligibility rate. It would be interesting to run a similar search in only the social science, psychological and legal journals (i.e., removing the dissertation component) to determine if this increased the eligibility rate. The large number of hits coupled with the fact that Proquest had a difficult interface
for reviewing, printing and importing results (refer to Section 3.1.1) meant that significant time was spent processing ineligible results.

The Association of Police Authorities (APA) database includes 42 records, none of which were relevant to the study. Many of the APA publications relate to police management (e.g., professional standards, equal opportunity in policing, performance management) and were of little relevant to investigative processes.

With the exception of the Cambridge Library (methodological limitations of the search process have already been highlighted), Ingenta proved to be the most targeted of the databases, producing the largest percentage of eligible results (23% inclusion overall). The highest number of eligible publications were extracted from CSA, however, provided the most number of eligible records (n=718 total records, 354 unique records) but 5,395 records had to be processed to deliver this result.

3.5. **Keyword(s) combination results**

Keyword combinations were analysed to determine those keywords that elicited the most relevant information. This section describes these successful keyword combinations, however, eligibility percentages for all keyword combinations have been produced and are included in the Excel database that accompanies this report. Tables presented in this section show the number and percentage of eligible records for a given search. Note that Tier One terms were not included in the search of the Cambridge Library. Also, as Tier One terms appeared in all other searches, the terms of relevance here are the Tier One, Three and Four terms that changed with each search.

3.5.1. **Tier One & Tier Two & Tier Three**

*Police* and *investigation* produced the greatest number (n=265) of eligible publications, followed by *police* and *investigative* (n=165). The same searches using *law enforcement* instead of *police* produced far fewer results (*investigation* n=93; *investigative* n=51). This trend was constant across all searches. This suggests that the *police* term is more successful than the broader *law*
enforcement term in eliciting information relevant to this search. Of all combinations, law enforcement and interview proved the least effective, only retrieving a total of 23 eligible records. Snapshots of these results are presented in Table 20 and Table 21.
Table 20 - Results for Serious Crime Tier 1 & Tier 2 & Tier 3 keywords by database (sorted by total number of eligible publications)

<table>
<thead>
<tr>
<th>Keywords</th>
<th>CSA</th>
<th>CUL*</th>
<th>Informit</th>
<th>Ingenta</th>
<th>Ovid</th>
<th>Proquest</th>
<th>WOK</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>research OR empirical OR evaluation OR study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>police investigation</td>
<td>90</td>
<td>12%</td>
<td>42</td>
<td>23%</td>
<td>30</td>
<td>19%</td>
<td>25</td>
<td>27%</td>
</tr>
<tr>
<td>police investigative</td>
<td>79</td>
<td>32%</td>
<td>3</td>
<td>75%</td>
<td>19</td>
<td>35%</td>
<td>18</td>
<td>38%</td>
</tr>
<tr>
<td>police interview</td>
<td>51</td>
<td>13%</td>
<td>2</td>
<td>40%</td>
<td>12</td>
<td>22%</td>
<td>17</td>
<td>14%</td>
</tr>
<tr>
<td>law enforcement investigation</td>
<td>53</td>
<td>21%</td>
<td>9</td>
<td>32%</td>
<td>1</td>
<td>3%</td>
<td>8</td>
<td>19%</td>
</tr>
<tr>
<td>police detection</td>
<td>36</td>
<td>23%</td>
<td>2</td>
<td>40%</td>
<td>1</td>
<td>3%</td>
<td>15</td>
<td>27%</td>
</tr>
<tr>
<td>law enforcement investigative</td>
<td>25</td>
<td>25%</td>
<td>2</td>
<td>67%</td>
<td>3</td>
<td>16%</td>
<td>8</td>
<td>47%</td>
</tr>
<tr>
<td>law enforcement detection</td>
<td>8</td>
<td>14%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>5</td>
<td>21%</td>
</tr>
<tr>
<td>interview</td>
<td>8</td>
<td>8%</td>
<td>1</td>
<td>50%</td>
<td>2</td>
<td>22%</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>Totals</td>
<td>350</td>
<td>17%</td>
<td>61</td>
<td>20%</td>
<td>68</td>
<td>18%</td>
<td>97</td>
<td>24%</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *Tier One used in all searches except for CUL.
Table 21 - Results for Serious Crime Tier 1 & Tier 2 & Tier 3 keywords by database (sorted by percentage eligible publications)

<table>
<thead>
<tr>
<th>Keywords</th>
<th>Tier 1 Eligible Records</th>
<th>Tier 1 % Eligible</th>
<th>Tier 2 Eligible Records</th>
<th>Tier 2 % Eligible</th>
<th>Tier 3 Eligible Records</th>
<th>Tier 3 % Eligible</th>
<th>CSA</th>
<th>CUL*</th>
<th>Informit</th>
<th>Ingenta</th>
<th>Ovid</th>
<th>Proquest</th>
<th>WOK</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>research OR empirical OR evaluation OR study</td>
<td>police investigative</td>
<td>79</td>
<td>32%</td>
<td>3</td>
<td>75%</td>
<td>19</td>
<td>39%</td>
<td>18</td>
<td>36%</td>
<td>26</td>
<td>32%</td>
<td>13</td>
<td>18%</td>
<td>7</td>
</tr>
<tr>
<td>law enforcement</td>
<td>investigative</td>
<td>25</td>
<td>25%</td>
<td>2</td>
<td>67%</td>
<td>3</td>
<td>18%</td>
<td>8</td>
<td>47%</td>
<td>6</td>
<td>14%</td>
<td>3</td>
<td>6%</td>
<td>4</td>
</tr>
<tr>
<td>police</td>
<td>detection</td>
<td>36</td>
<td>23%</td>
<td>2</td>
<td>40%</td>
<td>1</td>
<td>3%</td>
<td>15</td>
<td>27%</td>
<td>16</td>
<td>21%</td>
<td>4</td>
<td>7%</td>
<td>10</td>
</tr>
<tr>
<td>law enforcement</td>
<td>detection</td>
<td>8</td>
<td>14%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>5</td>
<td>21%</td>
<td>10</td>
<td>26%</td>
<td>1</td>
<td>2%</td>
<td>2</td>
</tr>
<tr>
<td>police</td>
<td>investigation</td>
<td>90</td>
<td>12%</td>
<td>42</td>
<td>23%</td>
<td>30</td>
<td>19%</td>
<td>25</td>
<td>27%</td>
<td>33</td>
<td>15%</td>
<td>22</td>
<td>4%</td>
<td>23</td>
</tr>
<tr>
<td>law enforcement</td>
<td>investigation</td>
<td>53</td>
<td>21%</td>
<td>9</td>
<td>32%</td>
<td>1</td>
<td>3%</td>
<td>8</td>
<td>19%</td>
<td>13</td>
<td>17%</td>
<td>4</td>
<td>1%</td>
<td>5</td>
</tr>
<tr>
<td>police</td>
<td>interview</td>
<td>51</td>
<td>13%</td>
<td>2</td>
<td>40%</td>
<td>12</td>
<td>22%</td>
<td>17</td>
<td>14%</td>
<td>43</td>
<td>16%</td>
<td>2</td>
<td>0%</td>
<td>11</td>
</tr>
<tr>
<td>law enforcement</td>
<td>interview</td>
<td>8</td>
<td>8%</td>
<td>1</td>
<td>50%</td>
<td>2</td>
<td>22%</td>
<td>1</td>
<td>10%</td>
<td>7</td>
<td>14%</td>
<td>3</td>
<td>1%</td>
<td>1</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>350</td>
<td>17%</td>
<td>61</td>
<td>20%</td>
<td>68</td>
<td>19%</td>
<td>97</td>
<td>24%</td>
<td>154</td>
<td>18%</td>
<td>52</td>
<td>2%</td>
<td>63</td>
</tr>
</tbody>
</table>

Note: Tier One used in all searches except for CUL.
3.5.2. **Tier One & Tier Three & Tier Four**

In total, Tier One AND Tier Two AND Tier Four search combinations retrieved 1,199, with an eligibility rate of 11 percent. Snapshots of these results are presented in Table 22 and Table 23.

Tier One AND Tier Two AND Tier Four keywords that retrieved the most number of eligible records were *police AND evidence* (n=241), *police and suspect* (n=172) followed by *police AND interrogation* (164 eligible records). *Police AND interrogation* also appears to be the most efficient search combination with a 39 percent eligibility rate. Closer inspection of these results shows that 25 search combinations produced less than 20 eligible records each. Future searches could usefully refine search terms to reduce this unproductive workload.
Table 22 - Results for Serious Crime Tier 1 & Tier 2 & Tier 4 keywords by database (sorted by total number of eligible publications)

<table>
<thead>
<tr>
<th>Keywords</th>
<th>Tier 2</th>
<th>Tier 4</th>
<th>CSA</th>
<th>% Eligible</th>
<th>CSA</th>
<th>% Eligible</th>
<th>CSA</th>
<th>% Eligible</th>
<th>CSA</th>
<th>% Eligible</th>
<th>CSA</th>
<th>% Eligible</th>
<th>CSA</th>
<th>% Eligible</th>
<th>CSA</th>
<th>% Eligible</th>
<th>CSA</th>
<th>% Eligible</th>
<th>CSA</th>
<th>% Eligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>police evidence</td>
<td>69</td>
<td>10%</td>
<td>19</td>
<td>17%</td>
<td>32</td>
<td>12%</td>
<td>0</td>
<td>0%</td>
<td>76</td>
<td>16%</td>
<td>6</td>
<td>1%</td>
<td>76</td>
<td>16%</td>
<td>6</td>
<td>1%</td>
<td>39</td>
<td>12%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>police suspect</td>
<td>42</td>
<td>18%</td>
<td>0</td>
<td>0%</td>
<td>9</td>
<td>14%</td>
<td>34</td>
<td>43%</td>
<td>59</td>
<td>26%</td>
<td>5</td>
<td>2%</td>
<td>59</td>
<td>26%</td>
<td>5</td>
<td>2%</td>
<td>23</td>
<td>37%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>police interrogation</td>
<td>39</td>
<td>62%</td>
<td>7</td>
<td>70%</td>
<td>18</td>
<td>38%</td>
<td>15</td>
<td>71%</td>
<td>63</td>
<td>34%</td>
<td>1</td>
<td>2%</td>
<td>63</td>
<td>34%</td>
<td>1</td>
<td>2%</td>
<td>21</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>police intelligence</td>
<td>44</td>
<td>13%</td>
<td>3</td>
<td>10%</td>
<td>25</td>
<td>21%</td>
<td>13</td>
<td>36%</td>
<td>8</td>
<td>5%</td>
<td>2</td>
<td>3%</td>
<td>8</td>
<td>5%</td>
<td>2</td>
<td>3%</td>
<td>1</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>police identification</td>
<td>15</td>
<td>9%</td>
<td>2</td>
<td>25%</td>
<td>11</td>
<td>14%</td>
<td>13</td>
<td>14%</td>
<td>25</td>
<td>7%</td>
<td>1</td>
<td>0%</td>
<td>25</td>
<td>7%</td>
<td>1</td>
<td>0%</td>
<td>26</td>
<td>26%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>law enforcement evidence</td>
<td>25</td>
<td>10%</td>
<td>2</td>
<td>22%</td>
<td>3</td>
<td>4%</td>
<td>1</td>
<td>2%</td>
<td>29</td>
<td>10%</td>
<td>0</td>
<td>0%</td>
<td>29</td>
<td>10%</td>
<td>0</td>
<td>0%</td>
<td>5</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>police scene</td>
<td>34</td>
<td>8%</td>
<td>1</td>
<td>33%</td>
<td>9</td>
<td>16%</td>
<td>1</td>
<td>3%</td>
<td>9</td>
<td>6%</td>
<td>2</td>
<td>2%</td>
<td>9</td>
<td>6%</td>
<td>2</td>
<td>2%</td>
<td>2</td>
<td>8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other combinations</td>
<td>100</td>
<td>8%</td>
<td>27</td>
<td>36%</td>
<td>42</td>
<td>15%</td>
<td>37</td>
<td>21%</td>
<td>84</td>
<td>13%</td>
<td>9</td>
<td>1%</td>
<td>84</td>
<td>13%</td>
<td>9</td>
<td>1%</td>
<td>11</td>
<td>8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>368</td>
<td>11%</td>
<td>61</td>
<td>24%</td>
<td>149</td>
<td>15%</td>
<td>114</td>
<td>23%</td>
<td>353</td>
<td>14%</td>
<td>26</td>
<td>1%</td>
<td>353</td>
<td>14%</td>
<td>26</td>
<td>1%</td>
<td>128</td>
<td>15%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *Tier One used in all searches except for CUL.
Table 23 - Results for Serious Crime Tier 1 & Tier 2 & Tier 4 keywords by database (sorted by percentage of eligible publications)

| Keywords          | Tier 2 | Tier 4 | CSA         | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible | Eligible Records | % Eligible |eligibility in all searches except for CUL.

Note: Tier One used in all searches except for CUL.
3.6. **Research information results**

As discussed in Section 2.5.3, eligible records were coded to capture information relevant to the research orientation of the publication. The following section presents results on eligible publication’s (1) research design; (2) research methods; (3) research questions; (4) offence type; (5) investigation outcomes; (6) region of study; (7) study population.

Given that records drawn from the Cambridge Library did not contain abstracts, researchers were unable to code research information for these results (designated as ‘Blank’ in the following tables).

### 3.6.1. Research design

Table 24 shows the number of eligible publications that used a particular research design. Over one-quarter (N=262) of articles were quantitative in nature, 15 percent (N=148) were qualitative, and 8 percent (N=77) used a mixed method design.

<table>
<thead>
<tr>
<th>Design</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative</td>
<td>262</td>
</tr>
<tr>
<td>Qualitative</td>
<td>148</td>
</tr>
<tr>
<td>Mixed methods</td>
<td>77</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
<tr>
<td>N/A</td>
<td>330</td>
</tr>
<tr>
<td>Unknown</td>
<td>57</td>
</tr>
<tr>
<td>Blank (CUL)</td>
<td>73</td>
</tr>
<tr>
<td><strong>Total Records</strong></td>
<td><strong>948</strong></td>
</tr>
</tbody>
</table>

### 3.6.2. Research methods

As shown in Table 25, just over thirty percent (N=587) of all eligible publications reported a research method in their abstract. Of these, surveys (N=175) were used nearly twice as the next most prevalent method which was interviews (N=99). Ninety-four publications reported an experimental method. Analysis of police files was mentioned often and is captured in the ‘other’ category.
### Table 25 - Research methods

<table>
<thead>
<tr>
<th>Method (Primary &amp; Secondary)</th>
<th>Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>94</td>
</tr>
<tr>
<td>Survey</td>
<td>175</td>
</tr>
<tr>
<td>Interviews</td>
<td>99</td>
</tr>
<tr>
<td>Case studies</td>
<td>82</td>
</tr>
<tr>
<td>Observations</td>
<td>42</td>
</tr>
<tr>
<td>Other</td>
<td>95</td>
</tr>
<tr>
<td>N/A</td>
<td>1075</td>
</tr>
<tr>
<td>Unknown</td>
<td>88</td>
</tr>
<tr>
<td>Blank (CUL)</td>
<td>146</td>
</tr>
<tr>
<td><strong>Total Records</strong></td>
<td><strong>1896</strong></td>
</tr>
</tbody>
</table>

### 3.6.3. Research questions answered

Researchers were asked to identify whether the publication related to the investigative process, the outcome of an investigation, or both. As shown in Table 26, 666 documents were oriented around the investigative process, 33 focused purely on the investigative outcome and 176 publications mentioned both the process and the outcome in the abstract. Section 3.8 provides the most frequently retrieved documents/references in relation to each research question.

### Table 26 - Research questions answered

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>666</td>
</tr>
<tr>
<td>Outcome</td>
<td>33</td>
</tr>
<tr>
<td>Both</td>
<td>176</td>
</tr>
<tr>
<td>Blank (CUL)</td>
<td>73</td>
</tr>
<tr>
<td><strong>Total Records</strong></td>
<td><strong>948</strong></td>
</tr>
</tbody>
</table>

### 3.6.4. Offence type

Over half (N=594) of the publications did not mention a specific offence type in the abstract and were coded as ‘generic’. Of those that did specify an offence type, the majority (35%) related to murder. Very few articles specifically mentioned wounding or assault, infanticide or manslaughter.
### Table 27 - Offence type

<table>
<thead>
<tr>
<th>Offence Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Murder</td>
<td>99</td>
</tr>
<tr>
<td>Sexual Assault</td>
<td>47</td>
</tr>
<tr>
<td>Rape</td>
<td>38</td>
</tr>
<tr>
<td>Wounding</td>
<td>6</td>
</tr>
<tr>
<td>Infanticide</td>
<td>3</td>
</tr>
<tr>
<td>Manslaughter</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>87</td>
</tr>
<tr>
<td>Generic (no offence specified)</td>
<td>594</td>
</tr>
<tr>
<td>Blank (CUL)</td>
<td>73</td>
</tr>
<tr>
<td><strong>Total Records</strong></td>
<td>948</td>
</tr>
</tbody>
</table>

### 3.6.5. Investigation outcomes

Of those publications that specified an outcome, a reference to the ‘failure’ of the investigative process was provided in 53 cases. Publications mentioned arrest or conviction in 21 articles. The number will not sum with those reported in Table 28 due to the fact that in some instances the publication mentioned an investigative outcome in the abstract, but failed to specify the outcome. Consequently, researchers were unable to code the type of outcome, and these were included in the ‘not applicable’ category.

### Table 28 - Investigative outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure</td>
<td>53</td>
</tr>
<tr>
<td>Arrest</td>
<td>21</td>
</tr>
<tr>
<td>Conviction</td>
<td>21</td>
</tr>
<tr>
<td>Charge</td>
<td>10</td>
</tr>
<tr>
<td>Multiple (e.g. Arrest and Charge)</td>
<td>27</td>
</tr>
<tr>
<td>N/A</td>
<td>743</td>
</tr>
<tr>
<td>Blank (CUL)</td>
<td>73</td>
</tr>
<tr>
<td><strong>Total Records</strong></td>
<td>948</td>
</tr>
</tbody>
</table>

### 3.6.6. Region of study

The majority of the studies conducted into serious crime investigations have been conducted in the US (n=217). Research has also been conducted in the United Kingdom (n=160), Europe (n=67) and Australia and New Zealand (n=56 studies). Thirty publications were based around research conducted in multiple locations.
Table 29 - Region of study

<table>
<thead>
<tr>
<th>Region</th>
<th>Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>217</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>160</td>
</tr>
<tr>
<td>Europe</td>
<td>67</td>
</tr>
<tr>
<td>ANZ</td>
<td>56</td>
</tr>
<tr>
<td>Multiple (e.g. USA &amp; Canada)</td>
<td>30</td>
</tr>
<tr>
<td>Canada</td>
<td>21</td>
</tr>
<tr>
<td>Asia</td>
<td>6</td>
</tr>
<tr>
<td>Middle East</td>
<td>6</td>
</tr>
<tr>
<td>Africa</td>
<td>4</td>
</tr>
<tr>
<td>South America</td>
<td>2</td>
</tr>
<tr>
<td>Australiasia Other</td>
<td>0</td>
</tr>
<tr>
<td>North American Other</td>
<td>0</td>
</tr>
<tr>
<td>Antarctica</td>
<td>0</td>
</tr>
<tr>
<td>N/A</td>
<td>187</td>
</tr>
<tr>
<td>Unknown</td>
<td>119</td>
</tr>
<tr>
<td>Blank (CUL)</td>
<td>73</td>
</tr>
<tr>
<td><strong>Total Records</strong></td>
<td><strong>948</strong></td>
</tr>
</tbody>
</table>

3.6.7. Study population

Researchers were asked to identify the population under research, where available, in the abstract of eligible documents. Results suggest that most research focused on criminal justice officials (n=296), followed by civilians (including victims) (n=77). Sixty-three publications examined multiple study populations.

Table 30 - study population

<table>
<thead>
<tr>
<th>Population</th>
<th>Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal Justice Officials</td>
<td>296</td>
</tr>
<tr>
<td>Civilians</td>
<td>77</td>
</tr>
<tr>
<td>Multiple</td>
<td>63</td>
</tr>
<tr>
<td>Offender</td>
<td>24</td>
</tr>
<tr>
<td>N/A</td>
<td>362</td>
</tr>
<tr>
<td>Unknown</td>
<td>53</td>
</tr>
<tr>
<td>Blank (CUL)</td>
<td>73</td>
</tr>
<tr>
<td><strong>Total Records</strong></td>
<td><strong>948</strong></td>
</tr>
</tbody>
</table>
3.7. Frequently retrieved literature

Analysis was conducted to determine which references were most frequently retrieved when conducting the systematic search across all search terms and databases.
Table 31 provides the list of references with their corresponding number of hits.

McQuiston-Surrett, Topp and Malpass’s 2006 article on the use of facial composite systems in US Law enforcement agencies was retrieved 19 times across the databases searched. This was followed by an article on criminal identity deception and deception detection in law enforcement by Wang, Chen and Atabakhsh (2004). Mark’s (1988) Undercover: Police surveillance in America was retrieved 14 times. Both Davies (2007) article on understanding variations in murder clearance rates and Meissner and Kassin’s (2002) article on investigator bias were located 12 times across the databases/keywords searched. The remaining documents listed in
Table 31 were retrieved 10 times or less.
Table 31 - Most frequently retrieved references across all searches and databases

<table>
<thead>
<tr>
<th>No.</th>
<th>Reference</th>
<th>No. of Hits</th>
</tr>
</thead>
</table>

3.8. Frequently retrieved literature across research question

As previously discussed, records were also coded to reflect whether the publication was oriented around the process of investigation, the outcome of an investigation, or both.

3.8.1. Investigative process

Table 32 shows that overall, McQuiston-Surrett, Top and Malpass' 2006 article on facial composites was the most frequently retrieved (19 hits) publication that dealt with the investigative process. Wang, Chen and Atabaksh’s article on identity decision was retrieved 15 times.
### Table 32 - Most frequent references relating to the investigative process

<table>
<thead>
<tr>
<th>Rating</th>
<th>Process</th>
<th>No. of Hits</th>
</tr>
</thead>
</table>

#### 3.8.2. Investigative outcomes

Lee’s 2003 dissertation on policies and practices in the US and South Korea was the most frequently retrieved publication that focused on investigative outcomes (7 hits), followed by Kassin’s 2007 contribution on false confessions, and Mouzos and Muller’s 2001 article on homicide solvability.

### Table 33 - Most frequent references relating to the outcome of an investigation

<table>
<thead>
<tr>
<th>Rating</th>
<th>Outcome</th>
<th>No. of Hits</th>
</tr>
</thead>
</table>

#### 3.8.3.
Investigative process and investigative outcomes

Bouffard’s 2000 article on sexual assault case closure was retrieved 10 times over the course of the search. This was followed by Henderson’s 2006 article on interrogations and confessions (9 hits), Gottschalk’s 2007 article on investigation performance (8 hits), and Keel, Jarvis and Muirhead’s 2009 article on factors affecting homicide investigations (8 hits).

Table 34 - Most frequent references relating to both the investigative process and the outcome of an investigation

<table>
<thead>
<tr>
<th>Rating</th>
<th>Both</th>
<th>No. of Hits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bouffard, J. A. (2000). Predicting type of sexual assault case closure from victim, suspect, and case characteristics. <em>Journal of Criminal Justice, 28</em>(6), 527-542.</td>
<td>10</td>
</tr>
</tbody>
</table>
3.9. Serious crime investigations literature over time

Analysis was conducted on the development of literature on serious crime investigations from 1970 onwards. Figure 4 presents the number of documents (not including duplicates) retrieved from the systematic literature search by year of publication. Searches were completed between April and June 2009, therefore, results for 2009 do not represent a complete calendar year. The results indicated that there has been a steady rise in publications between 1970 (four documents) and 2008 (81 documents). The maximum number of publications retrieved for a given year was 98 documents in 2007.

Figure 4 - Serious crime investigations literature over time
4. Discussion and recommendations

In April 2009, the RAI commissioned CEPS to conduct a systematic search, and design and populate an associated evidence database on a range of topics relating to the investigation of serious crime. To guide the literature search, the RAI proposed the following questions:

1. What are the processes by which serious crime is investigated and do these vary by crime type?

2. What are the strengths and weaknesses within the investigative process in terms of the successful detection of crime?

3. What are the aspects of serious crime investigations that effectively and efficiently contribute to the detection (and conviction) of serious crime and does this vary with crime type?

As part of this process, CEPS developed a search strategy to capture relevant literature, coded ineligible and eligible publications, constructed a database and library of eligible publications, and prepared a technical report outlining this process to enable the RAI to replicate the search in the future.

Thirty-two keywords, grouped into four tiers relating to (1) research orientation, (2) policing orientation, (3) global investigative terms; and (4) specific components of the investigation, were searched across eight databases (Cambridge Scientific Abstracts, Informit, Ingenta Connect, Proquest, Ovid, Web of Knowledge), two agency databases (Scottish Institute for Policing Research and Association of Police Authorities) and one library catalogue (Cambridge Library).

In total, 17,471 publications were identified, reviewed and coded over the course of the project. Of these, 2,046 records were coded as relevant to the research questions, and of these, 948 were unique records. Over half (52%) of the excluded records did not relate to the investigative process and over one quarter (28%) were excluded because the article focused on a non-serious crime (although articles that did not mention a crime type were classed as eligible).
An analysis of the eligibility proportion showed that the two search combinations (i.e., Tier One AND Tier Two AND Tier Three – 13% eligibility; Tier One AND Tier Two AND Tier Four – 11% eligibility) produced similar results. This was disappointing, given the amount of time spent piloting the search keywords and search fields to achieve the optimal eligibility rate and the greatest number of articles for each search. Unfortunately, the results suggest that each search combination will play out differently in each database. This is not good news for those wishing to create a uniform search strategy, as was the case in this project. The alternative is to pilot each search term, in each search field in each database, to determine the optimal way of search for each search term combination. Clearly, this would be a very time consuming process and not easily replicated.

Researchers did not analyse the proportion of the articles captured in one search that were also captured by another, where a single term was modified. For example, the Tier One search (research OR empirical OR evaluation OR study) AND police AND investigative produced 165 eligible records with a 30 percent inclusion rate. The Tier One search (research OR empirical OR evaluation OR study) AND law enforcement AND investigation produced 93 eligible records with a 13 percent inclusion rate. If these searches are producing the same articles, it would be very time efficient to eliminate the law enforcement keyword. As already discussed, it may be impossible to come to such a general position on the elimination of keywords given the different treatment of the searches by different databases.

Researchers also encountered problems with some of the major databases used. Proquest had a difficult interface for processing records. Together, with the very low eligibility percentage (Tier One – 2%; Tier Two – 1%), it is recommended that Proquest be eliminated from any future search replication. However, as discussed earlier, it may be worthwhile to search only the social science, psychological and legal journals (i.e., removing the dissertation component) to determine if this increased the eligibility rate. Given that many dissertations are converted to books or articles, this strategy may increase the eligibility percentage whilst not lose too many relevant records.
The very broad nature of the research questions also contributed to the complexity of the search and the low eligibility percentage. Serious crime is a broad concept and meant that researchers had to cast a broad net to capture relevant information. For example, the rape investigation literature is very different from the murder investigation literature, however, this search was required to capture both literatures. The use of synonyms in the literature (e.g., murder, death, killing) also meant that it would be difficult to determine an appropriate single term that could capture a crime category. As a result, a manual review of large datasets was required to determine eligibility.

An analysis of the eligible literature showed that the majority of publications into serious crime investigation have employed a quantitative research design. Survey and interview methods have been predominantly used.

Overall, 70 percent of eligible publications focused on the process of serious crime investigation. Over half of the publications did not mention a specific offence type in the abstract and were coded as ‘generic’. Of those that did specify an offence type, the majority (35%) related to murder. Very few articles specifically mentioned wounding or assault, infanticide or manslaughter.

Overall, the systematic search of serious crime investigation literature has produced a valuable database and library of relevant literature that will assist future researchers interested in this area. The numbers of publications relevant to serious crime investigation have steadily increased since 1970.
5. Appendices
Appendix A - Serious Crime Investigation Training and Coding Document

Overview

The literature search will focus broadly on the following questions:
1. What are the processes by which serious crime is investigated and do these vary by crime type?
2. What are the strengths and weaknesses within the investigative process in terms of the successful detection of crime?
3. What are the aspects of serious crime investigations that effectively and efficiently contribute to the detection (and conviction) of serious crime and does this vary with crime type?

Studies that focus on the police investigation of serious crime will be included. The investigation process is defined as encompassing activities that lead to the arrest of an offender. However the RAI is also interested in the outcomes of investigations, including charge, arrest and conviction rates.

Search Strategy

There are 4 tiers of keywords. The search strategy incorporates two search iterations:
1. Tier One AND Tier Two AND Tier Three
2. Tier One AND Tier Two AND Tier Four

Tier One – research focus
- research
- empirical
- evaluation
- study

Tier Two – agency keywords
- police
- law enforcement

Tier Three – global investigative keywords
- investigation
- investigative
- detection
- interview

Tier Four – specific investigative keywords
- solvability
- first response
- initial response
- call handling
- initial contact
- crime screening
- scene
- composites
- intelligence
- informant
- surveillance
- evidence
- house-to-house
- suspect
- interrogation
- identification
- proactive
- taskforce
- squad

Where possible, we propose to search Tier One - Three terms using an “abstract” search field, and Tier Four terms using an “all fields” search field. Database limitations may not allow this in all searches. We will note any modifications to this general search strategy to ensure the overall study can be replicated.

As each database is unique, you will:
- Receive specific instructions on how to enter the search terms, and how to export the reference to Endnote (if possible), for each database. You will also be given guidance about what the database does with duplicates, and whether sub-databases are identified when multiple database searches are completed. These last two are important for the completion of specific columns in the spreadsheets.
- Receive separate excel files for each database assigned. These will be returned to Belinda who will merge them into a Master.
- Be required to create a new Endnote library for each database search you do. Library file names are to be the same as the data entry name. E.g. Records retrieved from Ingenta Connect will be saved in an Endnote library called “Ingenta.enl”. Belinda will then merge these libraries to create a Master.

Searches will be conducted in 17 databases and 3 library catalogues.

Before You Get Started

1. Print out this document so you have it to refer to.
2. Make sure you have Microsoft Excel 2003. If you have a more recent version, please let Belinda know so we can test if there are any compatibility issues. If you Save As doc.xls, this should be ok but we want to be sure!
3. Get Endnote X2, also known as version 12. Endnote is not backwards compatible so make sure you have this version. If you already have Endnote on your computer in an earlier version, you must delete the program completely from your computer (using control panel, remove programs option), before attempting to install the new version. Endnote software can be downloaded free from http://www.griffith.edu.au/cgi-bin/frameit?http://www.griffith.edu.au/ins/training/endnote/content_purchas e.html Self-help resources are available from http://www.griffith.edu.au/library/workshops-training/self-help-resources/endnote
Search and Code Instructions

STEP 1 – Search Data & Exclusions

1. Open Search Data worksheet for the database you are working with.
2. Enter Date of Search in the form of DD/MM, i.e. 09/04 indicates 9 April.
3. Enter 2 initials for your first and last name under Researcher.
4. Note that the Database, Search Number, and Keywords fields have been completed for you. Do not alter these.
5. Access the database you are working with and search the keywords as per the instructions emailed with the excel file.
6. Return to the Search Data worksheet. Record the date parameters specified in the search. The goal is 1970-current, however some databases will only allow 1970-2009, or no date filter at all. In the latter instance, type “none”.
7. Record the total number of records returned in the Total Hits column.
8. Print out all records by citation and abstract, and write the search number in the top right hand corner of the print out. (The Search Number is already entered in column D of the spreadsheet).
   **Note:** For the training, print only first 30 records, and first 20 for IRR trial.
9. Review the records and draw a cross on any records that will be excluded and note the reason using the 3-letter codes in brackets shown in the table below. For “Other”, no abbreviation is necessary. Where a record meets more than one exclusion category, select the one that appears first in the table below. E.g. If the article can be excluded because it is not a serious crime and not related to investigative process, code it as NSC.

### REASONS FOR EXCLUSION

<table>
<thead>
<tr>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not a serious crime (NSC)</td>
<td>Exclude any publications in which the focus is not on serious crime. Serious offences include Murder, Manslaughter, Attempted Murder, Infanticide, Wounding, Rape, and Serious Sexual Assault. Non-violent offences such as burglary, fraud, or public disorder would be excluded. Drug offences are excluded. Where no offence is specified but it is still about the investigative process, include.</td>
</tr>
<tr>
<td>A serious crime but excluded from this study (SCE)</td>
<td>Arson, Robbery, Murder or Manslaughter as a result of a motor vehicle, Corporate Manslaughter, any offence types that are related to domestic violence, Gang-related offences, and Terrorist offences.</td>
</tr>
<tr>
<td>Article not related to investigative process (NIP)</td>
<td>No mention of investigative process</td>
</tr>
</tbody>
</table>
| Article related to investigative process, but topic excluded from this study (IPE) | Forensic Science – refers to all forensic science aspects of criminal investigation, e.g. DNA, fingerprinting, ballistics etc.  
  Profiling - refers to offender profiling, also called behavioral, psychological, personality, criminal profiling. Profiling processes of case linkage or linkage analysis are also to be excluded, as are modus operandi, signature, victimology, and crime scene reconstruction. Databases that assist with managing offence/offender information such as VICLAS and VICAP are also excluded.  
  Witness Management - refers to interviewing of witnesses and witness protection programs. This includes interviewing victims.  
  Post-charge Management - refers to the way records are managed once charges have been laid.  
  Trial Preparation - exclude all literature discussing how law enforcement prepare for trial. |
The review will only consider publications in English, French, or German. Exclude all other languages.

**Note:** For records in French and German, include all. These will be forwarded to a translator to determine final inclusion.

Tally the exclusions and enter the totals in the *Reason for Exclusion* columns. Note that there is an *Other* column. This column has been included to cater for exclusions that may arise as we go through the process. Place records that are excluded because they are not in English, French or German in this column. Note that Column W *Sum check inclusions* has been added to ensure the exclusions have been summed correctly. This column is automatically generated and should be equal to the *Total Number of Exclusions* column.

10. Complete the *Number of Within Search Duplicates* column as per the instructions emailed with the excel file for your database.

11. Open Endnote. Create a new library, using the data entry name of the database you are working on (see p.5). Set the reference style to APA 5th edition.

12. Return to the database and select those articles which will be included in the study and export these to Endnote. If you are unsure about the publication, select it as well as there is a place in the next spreadsheet to record this. Refer to the instructions emailed to you for your specific database. Please check that Endnote has correctly coded the Reference Type (e.g. I have exported Journal Articles, but Endnote has imported them as Books), and make the necessary corrections.

Where a database does not have export capability, each record will have to be manually entered. If manually entering, the minimum information required for a bibliographic reference must be entered. I haven’t listed these here because it is different for different reference types, e.g. for a book you would need: Author, Year, Title, City, Publisher; but for a Journal article you would need Author, Year, Title, Journal, Volume, Issue, Page number. Each reference type has these necessary fields. In addition, use the “URL” field to insert the address to the relevant webpage, and the “Link to PDF” field if the publication is available in pdf format online. The abstract must also be entered.

**STEP 2 – Literature Database: Search Information**

1. Open Literature Database worksheet. Note that the orange columns are the same as part of the Search Data worksheet. You will copy and paste the relevant information from the Search Data worksheet into the Literature Database worksheet for each reference found in that search. You may find this easier to do at the end, after you have entered all of the references.

**STEP 3 – Literature Database: Identifiers**

1. Enter the Record Number from the search printout. This will enable us to check what is entered in the spreadsheet, against what is written on your printout.
2. In the Eligible column enter either “Y” for yes for publications you are sure are included, and “M” for maybe for publications you are not sure about.

3. Where available, use the data entry name (see table over page) to record Sub-database that the publication was drawn from. Sub-databases for each search are listed below. Note, not all printouts will list a sub-database and the instructions you receive with the excel file will provide guidance on this.

<table>
<thead>
<tr>
<th>Database</th>
<th>Data Entry Name</th>
<th>Sub-database</th>
<th>Data Entry Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSA</td>
<td>CSA</td>
<td>Criminal Justice Abstracts</td>
<td>CJA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sociological Abstracts</td>
<td>SOC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SAGE Criminology</td>
<td>SAGECRIM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SAGE Sociology</td>
<td>SAGESOC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SAGE Political Science</td>
<td>SAGEPS</td>
</tr>
<tr>
<td>Informit</td>
<td>Informit</td>
<td>Australian Federal Police Digest</td>
<td>AFPD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CINCH Criminology</td>
<td>CINCH</td>
</tr>
<tr>
<td>Ingenta Connect</td>
<td>Ingenta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProQuest</td>
<td>ProQuest</td>
<td>ProQuest - Dissertations and Theses</td>
<td>PQ-DT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProQuest - Psychological Journals</td>
<td>PQ-Psych</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProQuest - Social Science Journals</td>
<td>PQ-SS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProQuest - Legal Module</td>
<td>PQ-LM</td>
</tr>
<tr>
<td>Ovid</td>
<td>Ovid</td>
<td>PsycEXTRA</td>
<td>PsycEXTRA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PsycINFO</td>
<td>PsycINFO</td>
</tr>
<tr>
<td>Web of Knowledge</td>
<td>WOK</td>
<td>Web of Science – Arts and Humanities</td>
<td>A&amp;HCI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Citation Index</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Web of Science - Social Sciences Citation Index</td>
<td>SSCI</td>
</tr>
<tr>
<td>Scottish Institute for Policing Research</td>
<td>SIPR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Association of Police Authorities</td>
<td>APA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Police Library via NPIA</td>
<td>NPL-NPIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cambridge University Library &amp; Dependent Libraries Catalogue</td>
<td>CUL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STEP 4 – Literature Database: Research Information**

Research information is to be extracted by reviewing the abstract. Follow the instructions over page for each field.

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DESCRIPTION</th>
<th>MENU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>What research design has been used? Choose one. Where it is a theoretical piece, N/A would be appropriate. Mixed Method is defined as studies using a combination of qualitative and quantitative. Unless otherwise specified in the abstract, make the following assumptions about design: (1) survey or experimental indicate a quantitative design, and (2) case studies or interviews indicate a qualitative design.</td>
<td>Qualitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mixed Methods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Primary Method</strong></td>
<td>What is the main method used? Choose one. If a theoretical piece, choose N/A.</td>
<td><strong>Experimental</strong>&lt;br&gt;Survey&lt;br&gt;Observations&lt;br&gt;Interviews&lt;br&gt;Case Studies&lt;br&gt;Other&lt;br&gt;N/A</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><strong>Secondary Method</strong></td>
<td>This category is for studies using more than one method. Choose one. Choose N/A if single method.</td>
<td><strong>Experimental</strong>&lt;br&gt;Survey&lt;br&gt;Observations&lt;br&gt;Interviews&lt;br&gt;Case Studies&lt;br&gt;Other&lt;br&gt;N/A</td>
</tr>
<tr>
<td><strong>Research Question</strong></td>
<td>Does the research focus on investigative processes (e.g. suspect interrogation), or the outcome of investigations? Outcome specifically refers to charge, arrest, conviction or failure (see outcome description for explanation of failure). If it is not one of these outcomes, then do not choose the outcome option.</td>
<td>Process&lt;br&gt;Outcome&lt;br&gt;Both</td>
</tr>
<tr>
<td><strong>Offence Type</strong></td>
<td>Which offence is the focus of the research? If there is more than one, enter Other, and specify using the offence terms in the menu. E.g. rape and serious sexual assault. There may be instances where the offence type may be relevant but not listed. An offence such as kidnapping is not listed, but is relevant because it is likely to involve one of the listed offence types. Another example is organised crime, it is not listed, but is an activity that results in the offences listed. In these instances, identify the publication with an M in the eligibility column, and specify in the other category. E.g. Other, organised crime, or Other, kidnapping.</td>
<td>Murder&lt;br&gt;Manslaughter&lt;br&gt;Attempted Murder&lt;br&gt;Infanticide&lt;br&gt;Wounding&lt;br&gt;Rape&lt;br&gt;serious Sexual Assault&lt;br&gt;Generic (no offence specified)&lt;br&gt;Other (specify multiples and unlisted offences).</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>Which outcome/s are the focus of the research? If there is more than one, enter Other, and specify using the terms in the menu. E.g. Other, arrest and conviction. Failure refers to failure of the investigative process to achieve an outcome; including failure to arrest, failure to charge, or failure to convict. Failure would also include wrongful charge, arrests or convictions. Only enter the listed outcomes, do not make up your own. If none of these enter N/A.</td>
<td>Charge&lt;br&gt;Arrest&lt;br&gt;Conviction&lt;br&gt;Failure&lt;br&gt;Other, specify multiples.&lt;br&gt;N/A</td>
</tr>
<tr>
<td><strong>Region</strong></td>
<td>Which region/s was the research conducted? If more than one, e.g. a comparative study, enter all relevant regions. For theoretical pieces, choose N/A. See the table over page for explanation of which countries are included in each item.</td>
<td>USA&lt;br&gt;Canada&lt;br&gt;North American Other&lt;br&gt;South America&lt;br&gt;United Kingdom&lt;br&gt;Europe&lt;br&gt;Asia&lt;br&gt;Middle East&lt;br&gt;Africa&lt;br&gt;ANZ&lt;br&gt;Australasia Other&lt;br&gt;Antarctica&lt;br&gt;N/A</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td>What population is the sample drawn from? For combinations choose other and specify. E.g. Other, offender and civilians. For theoretical pieces, choose N/A.</td>
<td>Offender&lt;br&gt;Criminal justice officials&lt;br&gt;Civilians&lt;br&gt;Other, specify multiples.&lt;br&gt;N/A</td>
</tr>
</tbody>
</table>

**Notes:**
1. Sometimes the abstract may not provide enough information to determine the variable. In this instance, enter “?”
2. In instances where information is provided but you are unsure of how it should be coded, enter “U”
3. Pay careful attention to how the “Other” column is meant to be used for each variable as it is used differently.
### Region Menu Descriptions

<table>
<thead>
<tr>
<th>Menu Item</th>
<th>Description/Inclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
<tr>
<td>Canada</td>
<td>Canada</td>
</tr>
<tr>
<td>North American</td>
<td>Greenland, Mexico, Cuba, Central America (Panama, Nicaragua, Guatemala, Honduras, Belize, El Salvador and Costa Rica), and Caribbean (Bahamas, Dominican Republic, Haiti, Jamaica, West Indies).</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>South America</td>
<td>Brazil, Colombia, Venezuela, Guyana, Suriname, French Guiana, Ecuador, Peru, Bolivia, Paraguay, Chile, Argentina, and Uruguay.</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>England, Scotland, Wales, and Ireland.</td>
</tr>
<tr>
<td>Europe</td>
<td>Russian Federation, Belarus, Poland, Czech Republic, Slovakia, Hungary, Ukraine, Moldova, Romania, Bulgaria, Albania, Georgia, Azerbaijan, Armenia, Iceland, Norway, Sweden, Finland, Estonia, Latvia, Lithuania, Denmark, Netherlands, Switzerland, Belgium, France, Austria, Monaco, Luxembourg, Germany, Slovenia, Croatia, Bosnia, Serbia, Macedonia, Greece, Cyprus, Malta, Italy, Andorra, Spain, Portugal.</td>
</tr>
<tr>
<td>Asia</td>
<td>Include all countries in Central, East, and South Asia under this item East Asia: China, Japan, Korea, Central Asia: Mongolia, Uzbekistan, Turkmenistan, Kazakhstan, Kyrgyzstan and Tajikistan. South Asia: India, Afghanistan, Pakistan, Nepal, Bangladesh, Bhutan, Myanmar, Laos, PDR, Thailand, Cambodia, Vietnam, The Philippines, Sri Lanka, Maldives, Brunei Darussalam, Malaysia, Singapore, Indonesia, Timor-Leste, Maldives.</td>
</tr>
<tr>
<td>Middle East</td>
<td>Also known as West Asia, includes these countries: Syrian Arab Republic, Lebanon, Palestine, Jordan, Iraq, IR Iran, Kuwait, Kingdom of Bahrain, Kingdom of Saudi Arabia, State of Qatar, United Arab Emirates, Sultanate Of Oman, Yemen.</td>
</tr>
<tr>
<td>ANZ</td>
<td>Australia and New Zealand</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Antarctica</td>
<td>Antarctica</td>
</tr>
</tbody>
</table>

### STEP 5 – Literature Database: Reference Information

1. Copy and paste the full Reference from Endnote. Make sure your Endnote is set up for APA 5th edition format. There is a drop down menu in the top left corner of Endnote to change reference styles.  
   2. Where the publication is available online, paste the Link.  
   3. Copy and paste the Abstract.

Finally, check you have pasted in the search information for each entry (listed as STEP 2, but may be quicker to do at the end of the process). Email the completed file back to Belinda, b.stocks@griffith.edu.au
Appendix B - Specific Database Instructions

CSA databases


If after clicking on this weblink you are asked to login, you will need to go back through the Griffith catalogue, click here to do so:


1. Select databases

- Criminal Justice Abstracts
- Social Services Abstracts
- Criminology: A SAGE Full-Text Collection
- Political Science: A SAGE Full-Text Collection
- CSA Sociological Abstracts
- Sociology: A SAGE Full-Text Collection

Check that these databases are listed as selected after you have gone to the Search Tools page.

2. Entering Search Terms

Select Search Tools tab
Select Command Search tab

2.1 Tier One + Two + Three

For searches CSA001-CSA008, enter the keywords as per the sample format below.
2.2 Tier One + Two + Four

For the remaining searches, enter the keywords as per the sample format below.

AB=(research OR empirical OR evaluation OR study) AND AB=police AND AB=investigation

3. Date Filter

Set “Date Range” to 1980-2009. I have already completed the Date Filter column for you as 1980-2009 in the spreadsheet.

4. Printing Records

Click the Mark box (above left of first record). This will mark all records.
Click Save, Print, Email
Select Full Format – no references
Select Text for document format
Select APA for bibliographic style
Click Print Preview
Use your Internet Browser File, Print buttons.

5. Importing to Endnote

CSA does not allow you to directly export into Endnote. However, it does allow you to save the records in a format that can be imported by Endnote.
Click Save, Print, Email link
Ensure Marked Records is selected
Ensure Full Format selected
Leave duplicates box unchecked
Before Clicking Save, ensure PC file format is selected.
Click Save (be sure to save as a .txt file and remember where you save it!)

| 1 | Use 10 Marked Records |
| 2 | Use 13 records from the current results list of All Publication Types |
| From record 1 to 15 of 13 Published Works (maximum 500 at a time) |
| Full format | Include duplicates |

Comments:

New! Create a bibliography with QuikBib (Only records for Published Works will be processed.)

Choose a document format:

- HTML
- Text

Choose a bibliographic style:

- APA - American Psychological Association, 5th Edition

Create

Email

To: 
From: 
optional

Save

File format: PC Macintosh Unix

Print Preview

Export to RefWorks

Open your Endnote library.
Click File → Import. An Import pop window should emerge.
Use the Choose File button to browse for the .txt file you just saved.
Import option: select Other filters, click on Find by and select CSA, then select Criminology.
Duplicates: select Import into Duplicate library
Text Translation: select no translation
Click Import
Endnote may automatically open up your duplicate library, and minimise the library you were working with, so don’t be alarmed if all of the entries don’t appear. Check the original library. Open each record and check that the information has imported correctly and make any necessary corrections.

6. Sub Database

This database does indicate which sub-database the record is from in the right side of each record. You will need to note these as part of Step 3 – Literature Database - Identifiers.

7. Duplicates

By leaving the Include Duplicates box unchecked when we saved our records, we tell the database to delete any duplicates. This means that if there were duplicates (more than one of the same publication) in the original number of hits, these will have been removed in the saved/printed file. For example, you may have 100 total hits, and 30 exclusions. This implies you will save/print 70 records. However, when you do this you may find only 69 records. This means a duplicate has been removed. You need to record the number of duplicates in the Search Data spreadsheet. This column handles duplicates that occur within the same database. The “Import into Duplicate Library” option in Endnote you will manage between database duplicates. You do not need to worry about these.
Informit


Under Informit Index Databases select:
- AFPD (Australian Federal Police Digest), and
- CINCH (Australian Criminology Database)

Click continue

1. Entering Search Terms

1.1 Tier One + Two + Three

For searches INF001-INF008, type the keywords in the following format into the “Search Query” box:

AB=(research OR empirical OR evaluation OR study) AND AB=police AND AB=investigation

Where the keyword is two words, such as law enforcement, enter AB=law enforcement. Do not use quotation marks. This applies for Tier One+Two+Four also. (Note exception: keywords with hyphens need quotation marks, e.g. “house-to-house”.)

Leave in “any field”

1.2 Tier One + Two + Four

The remaining searches need to be done differently because we want the Tier Four word to be searched in all fields and this particular database doesn’t have a code for that to put into the search query.

Enter the following into the first “Search Query” box:
AB=(research OR empirical OR evaluation OR study) AND AB=police

Leave in “any field”

Leave AND

In the second search query box type the Tier Four word

Leave in “any field”

2. Date Filter

Tick “Date Range” and enter 1970. Leave the next box blank. Note that after you do the search it automatically fills in 2009, so I have already completed the Date Filter column for you as 1970-2009.

3. Sub Database

This database does indicate which sub-database the record is from in the bottom right corner of the brief for each record. In this case, it is either AFPD or CINCH. You will need to note these as part of Step 3 – Literature Database - Identifiers.

4. Exporting to Endnote

Click Save
Under Records to Save, select Marked Records
Under Fields to Save, select Complete Record
Under Field Label Format, leave as Short Field Labels
Under Output Format, select Endnote Direct

You may get pop ups asking if you want to open or save the file, click Open. Endnote will then open and the records will appear. Open each record and check that the information has imported correctly. One issue seems to be that Endnote incorrectly assigns the reference type, i.e. imports it as Generic, when it is a Journal Article. The implication of this is that the reference information doesn’t appear in the correct fields, e.g. the volume number is not in the volume number field. Please check the reference information appears as it should.

5. Duplicates

This database does not automatically delete duplicates. You will calculate the total number of duplicates and record them in the duplicate column of the Search Data spreadsheet.
Ingenta Connect


On the Ingenta Connect Welcome Page, click Browse (from menu on the right). This will expand the menu, click on the Advanced Search option.

1. Entering Search Terms

This database has the capacity to search title, abstract, and keywords only. However it does not accept field codes so we are unable to tell it to search just one of these three. It provides two options, see below, all three or the article title. It can not search full text.

Search for: (*)

In article title, keywords or abstract  In article title

Ingenta recognises Boolean operators such as AND, OR; but does not like the Tier One word “study”. Attempts to incorporate the word “study” with other Tier One words resulted in a time out. For example:

(research OR study) AND police AND investigation

However, it was able to process the other Tier One words simultaneously. For example,

(research OR empirical OR evaluation) AND police AND detection

Due to these results, the searches including Tier One words of “research”, “empirical”, and “evaluation” will be done simultaneously. Searches using the Tier One word “study” will be done separately. For example

(research OR empirical OR evaluation) AND police AND detection

study AND police AND detection

Use the above formats to enter the keywords, with “In article title, keywords or abstract” selected.

Where a phrase is used, use quotation marks, e.g.;

(research OR empirical OR evaluation) AND “law enforcement” AND “crime screening”
2. Date Filter

Ingenta does not have a “Date Range” option. I have already completed the Date Filter column for you as “None” in the spreadsheet.

3. Printing Records

Click Tools, Print.

4. Exporting/Importing to Endnote

Ingenta does have an Export to EndNote option, but it didn’t work when I tried to use it. To try exporting to Endnote, do the following:

Click on Tools in the right menu.
Click Export Options.
Click Endnote
Click Save

If this does not work, you will need to save the records as a .txt file and import them into EndNote.

Instead of clicking Endnote, click plaintext
The results should appear as if ready to print. Click File, Save As, and save as a .txt file. Remember where you save it!
Open your Endnote library.
Click File → Import. An Import pop window should emerge.
Use the Choose File button to browse for the .txt file you just saved.
Import option: select Other filters, select UnCover (INGENTA).
Duplicates: select Import into Duplicate library
Text Translation: select no translation
Click Import

Endnote may automatically open up your duplicate library, and minimise the library you were working with, so don’t be alarmed if all of the entries don’t appear. Check the original library. Open each record and check that the information has imported correctly and make any necessary corrections.

5. Duplicates

This database does not specify how it handles duplicates. If duplicates do appear, calculate the total number of duplicates and record them in the duplicate column of the Search Data spreadsheet.

6. Sub-database

Although Ingenta draws from a variety of publishers, these are not specified as sub-databases therefore this column of the spreadsheet will be left blank.
1. Select databases

Click Select Multiple Databases
Select:
- Dissertations and Theses
- ProQuest Psychology Journals
- ProQuest Social Science Journals
- ProQuest Legal Module
Click Continue

2. Entering Search Terms

2.1 Tier One + Two + Three

Type the keywords in the following format into the Basic Search box:

ABS(research OR empirical OR evaluation OR study) AND ABS(police) AND ABS(investigation)

This query will search for the terms by abstract.

2.2 Tier One + Two + Four

For the remaining searches, type the keywords in the following format into the Basic Search box. Note that the Tier Four word is searched for in the citation and full document. There is no field code for this, but the word is placed in brackets.

ABS(research OR empirical OR evaluation OR study) AND ABS(police) AND (solvability)

Where a phrase is used, use quotation marks, e.g.;
ABS(research OR empirical OR evaluation OR study) AND ABS(“law enforcement”) AND (“house-to-house”)

3. Date Filter

In Date Range, select “after this date” and enter 01/01/1970. This date will be pre-entered into the Date Filter column of the spreadsheet. Click Search.

4. Printing Records

Click on the Mark All box (above left of first record). Click Cite
Under format, select Document Summaries (citation & abstract)
Under citation style select Proquest Standard (do not select APA here as the output includes APA style information not relevant to our purposes)
Click Print

5. Exporting to Endnote

Select the records eligible for inclusion.
Click on Export.
Select “Export directly to ProCite, EndNote or Reference Manager”.

A pop up window may ask you to Open with or Save, the default should be on Open with, click Ok. If EndNote is already open, it will then pop up on your screen and show the imported documents. If it was closed, it will ask you which library you wish to open to import the files. You should have created an EndNote library specifically for this database called ProQuest.enl.

6. Sub-database

ProQuest does not specify from which sub-database each record was drawn, therefore this column of the spreadsheet will be left blank.
Ovid


1. Select databases

Under Databases select:
- PsycEXTRA
- PsycINFO

Click Open Selected Resources

2. Entering Search Terms

2.1 Tier One + Two + Three

Go to the Multifield search. Type the keywords into the search fields as follows. You will need to Click Add New Row to enter all terms.

Note that OR is selected between the Tier One words (research, evaluation, empirical, study) while AND is selected prior to the Tier Two and Tier Three words (police, investigation).

2.2 Tier One + Two + Four
3. Date Filter

Click on Limits to expand and select 1970 to current for the year. This has already been completed in the Date Filter box of the spreadsheet. Click search. Scroll down to view results.

4. Removing Duplicates

Before printing records, click Remove Duplicates (centred above search results). Ensure that “has abstract” is selected. Click Continue.

5. Printing Records

Go to the Results Manager. Under Results, select All in this Set. Under Fields, select Citation and Abstract. Under Results format, select Ovid. Be sure to check the Include Search History box also. Click Print Preview. Use your Internet Browser’s File, Print buttons.

6. Exporting to Endnote

Go to the Results Manager. Under Results, select Selected Results. Under Fields, select Complete Reference. Under Results format, select Direct Export. Click Save

A pop up window will ask you to Open with (will be the default) or Save, click Ok, you want to open. EndNote will then automatically open showing the imported references. If it does not, it may provide a pop up asking you to choose a filter or connection file, select PsycINFO provided by OvidSp. You can find this quickly in
the list by typing PsycINFO into the search box and clicking Find by. Once you find it, click choose.

7. Sub-databases

Ovid does identify which sub-database the record is from. You will need to record whether the record came from PsycEXTRA of PsycINFO in the Sub-databases column.
Web of Knowledge (WOK)


This link takes you directly to the Web of Science page within Web of Knowledge. If you use some other way of accessing Web of Knowledge, be sure to click on Web of Science tab before proceeding.

1. Entering Search Terms

WOK does not allow searches by all fields, therefore Tier One+Two+Three and Tier One+Two+Four searches will be conducted the same way.

Click Advanced Search

WOK does not have a field code for abstract, but the field code “topic” denoted by TS, searches by title, abstract and keywords. Enter the keywords into the Advanced Search box as follows:

TS=(research OR empirical OR evaluation OR study) AND TS=(police) AND TS=(investigation)

For terms with multiple words (e.g. law enforcement), use quotation marks as demonstrated below.

TS=(research OR empirical OR evaluation OR study) AND TS=("law enforcement") AND TS=("call screening")

We have one hyphenated word in our search, “house-to-house”. WOK does not recognise hyphens, these words need to be entered as one word like so:

TS=(research OR empirical OR evaluation OR study) AND TS=(police) AND TS=(housetohouse)

2. Date Filter – “Timespan”
Ensure the Timespan is set to All Years. We do not enter a specific date range because the database only dates back to 1977. The date filter column has already been completed in the spreadsheet as “All years (1977 to current)”.

3. Select Databases

We are only doing the search in:
- Web of Science – Arts and Humanities Citation Index
- Web of Science – Social Sciences Citation Index
Do not select the Science Citation Index.
Click Search

4. Printing Records

To view the results, scroll down to the search history and click on the results number (it will appear in blue). Your results should then appear.
Scroll down to the bottom of the page to the Output Records section.
In Step 1, click on Records and enter the range. For example, if 60 records were found, enter 1-60.
In Step 2, ensure Authors, Title, Source is selected with the plus Abstract box ticked.
In Step 3, click Print. Your results should then appear ready to print. Select the “Print this Page” button in the top right corner. Note: 100 records will be displayed per page. For example, if there are 136 records, 100 records will appear on one page, and 36 on another. You will need to print both pages.

5. Exporting to EndNote

After selecting the records for inclusion, scroll down to the bottom of the page to the Output Records section.
In Step 1, click on Selected Records On Page.
In Step 2, click on Full Record.
In Step 3, click Save to EndNote, RefMan, ProCite. A pop up window will ask if you want to Open or Save, it should be default selected on Open so click Ok.
EndNote will then automatically open up and display the records.

6. Sub-databases

The WOK output does not specify which sub-database the record was drawn from therefore this column of the spreadsheet will be empty.

7. Duplicates

There is no information about how WOK deals with duplicates. Be aware of this and manually count duplicates should they appear.
Scottish Institute for Policing Research (SIPR)

http://www.sipr.ac.uk/publications/index.php

1. Entering Search Terms

Due to the small amount of publications held on this site (approximately 30), it does not have a search engine to facilitate the existing search strategy. Given the limited number of records, it is appropriate to peruse each of them. You will be reviewing two sections of the publications page:
- Research Papers and Reports
- Research Resource

Click on Research Papers and Reports
Links for the publications will appear in order of:
- Annual Reports of the SIPR
- SIPR Briefings
- Reports and Papers by SIPR funded students, PDRAs and PHD students, and Practitioner fellows

Print this web page using the File, Print buttons in your Internet browser, and mark your exclusions on it. If you can note tell from the title and short abstract provided, access the full document by clicking on the link.

Repeat the process for the Research Resource section.

Count the total number of records to enter into the Total Hits column.

2. Date Filter

As SIPR has no search capacity, there is no date filter. I have already completed this column in the spreadsheet as none.

3. Exporting to EndNote

There is no EndNote compatibility so records will need to be entered manually. Where an abstract is not available, copy and paste the executive summary if one is available from the full document.
Association of Police Authorities (APA)

http://www.apa.police.uk/APA/Publications/

1. Entering Search Terms

Due to the small amount of publications held on this site (40-50), it does not have a search engine to facilitate the existing search strategy. Given the limited number of records, it is appropriate to peruse each of them.

2. Printing Records

I suggest that you click on each publication link (appear on the left) and copy the publication information that appears into a word document. Do this for each publication and then print out your word document. Mark your exclusions on this. If you can note tell from the title and description provided, access the full document.

3. Exporting to EndNote

There is no EndNote compatibility so records will need to be entered manually. Where an abstract is not available, copy and paste the executive summary if one is available from the full document.

4. Date Filter

As APA has no search capacity, there is no date filter. I have already completed this column in the spreadsheet as none.
National Police Library via NPIA (NPL-NPIA)

You do not need to be a registered user to search the library catalogue. Go to the link below, and click Enter the Catalogue.

http://library.npia.police.uk/default.htm

1. Entering Search Terms

1.1 Tier One + Two + Three

The catalogue does not allow searching by abstract. Tier One search terms will be searched by All Fields, as these words are not often chosen as subjects or keywords, so searching by Subject/Keywords for Tier One words excludes the majority of relevant literature. Tier Two and Three will be searched by Subjects/Keywords. All terms will be searched in All Media. Enter the search terms as they appear below.

Tier One terms appear in row 1. These are entered simultaneously and separated with OR. The field is All fields.

Tier Two terms appear in row 2, and are searched by Subjects/Keywords.

Tier Three terms appear in row 3, and are searched by Subjects/Keywords. Enter compound terms in quotation marks, e.g. “law enforcement”.

Under display format, ensure Full is selected.

Under Full, ensure Abstract, Keywords, Links (Default Full) is selected.

Click Search

1.2 Tier One + Two + Four

Tiers One and Two will be searched as above, that is, Tier One All fields, Tier Two Subjects/Keywords. Tier Four terms appear in row 3, and are searched by All fields.

2. Date Filter

NPL-NPIA does not have a date filter. The date filter column of the spreadsheet has been completed has “none”.

3. Printing Records
Click the Print icon (top right). 
Select range so that all documents are printed. 
Select Full as the output style, and ensure Abstract, Keywords, Links (Default Full) is selected. 
Click Ok. 
A preview of results will appear. Click the Print icon and follow the printer’s on screen prompts.

4. EndNote

NPL-NPIA is hosted by Heritage and EndNote does not have an import filter for this. This means that you can not export/import records from NPL-NPIA to EndNote. Inclusion records will need to be entered into manually (use copy and paste where appropriate).

5. Sub-database

This library catalogue does not have sub-databases, therefore this column of the spreadsheet will be blank.

6. Duplicates

This database does not specify how it handles duplicates. If duplicates do appear, calculate the total number of duplicates and record them in the duplicate column of the Search Data spreadsheet.
Cambridge University Library (CUL)

Warning: This webpage times out quickly. Do not leave idle or progress will be lost.

http://ul-newton.lib.cam.ac.uk/

1. Date Filter

Click the Guided Search page.
Before conducting the search, click More Search Limits (bottom right). See the Date Filter section below.
Under Date, enter 1970 in the first box and select After. Do not touch any other limits.
Click Set Limits. The page will revert back to the Guided Search page.
Do not attempt to set the limits after entering the search terms as when the limits are set, it refreshes the guided search page so that all terms are cleared.

2. Entering Search Terms

CUL does not allow search by Abstract. The most appropriate field it does offer is Keyword Anywhere. Pilot searches revealed that when the research focused Tier One terms were used, the search was too limited as these words are not often listed as keywords. As there is no broader field to search by, Tier One words will not be used to search CUL. The following searches will be completed: Tier Two+Three, and Tier Two+Four.
Enter Tier Two word in the first row, search by “all of these”, in “Keyword Anywhere”.
Ensure AND is selected between rows 1 and 2.
Enter Tier Three or Four word in the second row, search by “all of these”, in “Keyword Anywhere”.
Ensure 50 records per page is selected.
Ensure “as a phrase” is selected for terms with multiple words, e.g. “law enforcement”.
Click Search.
Do not attempt to complete this search via the simple search page as different results are obtained.

3. Printing Records

CUL does not have an option to select all records so you will need to scroll through all pages and manually select each record. Make sure you click "Retain Selected" before moving to the next page or your selections will be cleared. When all records have been selected, scroll to the bottom of the page to the Records Option box.
Under Records, select the Selected All Pages option.
Select the download format as Full Record.
Click Format for Print/Save.
Use your Internet Browser File, Print buttons to Print.

Note: CUL records do not have abstracts. You will be required to code on the limited information available. Subsequently, for many of the research variables you may enter “?” to indicate not enough information available to determine a code.

4. EndNote

Click Clear Selected as we don’t want all records selected for EndNote.
Mark records for inclusion. Make sure you click “Retain Selected” before moving to the next page or your selections will be cleared.
Scroll to the bottom of the page to the Records Option box.
Under Records, select the Selected All Pages option.
Select the download format as EndNote Citation
Click Format for Print/Save.
Use the File, Save As buttons in your Internet Browser to save the records displayed as a .txt file. Name them according to the search, e.g. CUL001.txt.
Open your EndNote library.
Click File, Import. An Import pop window should emerge.
Use the Choose File button to browse for the .txt file you just saved.
Import option: select Other filters, select Voyager.
Duplicates: select Import into Duplicate library
Text Translation: select no translation
Click Import

Endnote may automatically open up your duplicate library, and minimise the library you were working with, so don’t be alarmed if all of the entries don’t appear. Check the original library. Open each record and check that the information has imported correctly and make any necessary corrections.

5. Sub-database

This library catalogue does not have sub-databases, therefore this column of the spreadsheet will be blank.

6. Duplicates
This database does not specify how it handles duplicates. If duplicates do appear, calculate the total number of duplicates and record them in the duplicate column of the Search Data spreadsheet.
Appendix C - References of Relevant Literature


Arnold, J. (2001). Early misconduct detection. Law and order, 49(8), 80-86.


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