

This file is part of the following work:

, Belle (2023) *No bodies are still somebodies: evaluating the use of public online information to develop a dataset of characteristics on long-term missing persons within Australia.* Masters (Research) Thesis, James Cook University.

Access to this file is available from:

<https://doi.org/10.25903/nnkt%2D9c28>

Copyright © 2023 Belle

The author has certified to JCU that they have made a reasonable effort to gain permission and acknowledge the owners of any third party copyright material included in this document. If you believe that this is not the case, please email

researchonline@jcu.edu.au

NO BODIES ARE STILL SOMEBODIES:

Evaluating the use of public online information to
develop a dataset of characteristics on long-term
missing persons within Australia

Belle

Bachelor of Information Technology

Submitted in fulfilment of the requirements for the degree of

Master of Philosophy

College of Science and Engineering

James Cook University

2023

NO BODIES ARE STILL SOMEBODIES:

Evaluating the use of public online
information to develop a dataset of
characteristics on long-term missing persons
within Australia

TABLE OF CONTENTS

| | |
|---|-----------|
| Key Terms..... | x |
| Acknowledgments | 1 |
| Acknowledging long-term missing persons and those affected | 2 |
| Abstract..... | 3 |
| Chapter 1 Introduction..... | 6 |
| 1.1 Motivation..... | 6 |
| 1.2 Background | 7 |
| 1.3 Research Problem | 9 |
| 1.4 Aims and Objectives | 11 |
| 1.5 Significance..... | 12 |
| 1.6 Limitations | 14 |
| 1.7 Structure | 14 |
| 1.8 Summary | 15 |
| Chapter 2 Literature review | 16 |
| 2.1 Background | 16 |
| 2.2 Missing Person Profile | 21 |
| 2.3 Long-term missing persons | 23 |
| 2.4 Cause of disappearance: Unintentional/Escape/Dysfunctional..... | 24 |
| 2.4.1 Cause of disappearance: Unintentional..... | 27 |
| 2.4.2 Cause of disappearance: Escape | 27 |
| 2.4.3 Cause of disappearance: Dysfunctional | 27 |
| 2.5 Significance..... | 28 |
| 2.6 Conclusion | 29 |
| Chapter 3 to Chapter 5..... | 31 |
| Chapter 3 Methodology | 32 |
| 3.1 Introduction..... | 32 |
| 3.2 Part I – Data Collection..... | 33 |
| 3.2.1 Stage one – Long-term missing persons source website identification | 33 |
| Stage one – NMPCC | 34 |
| Stage one – AMPR..... | 34 |
| 3.2.2 Stage two – Identification of LTMPs from source websites..... | 35 |
| Stage two – NMPCC..... | 35 |
| Stage two – AMPR | 36 |
| 3.2.3 Stage three – Inclusion and exclusion of LTMPs | 37 |
| Stage three – Inclusion criteria..... | 37 |
| Stage three – Exclusion criteria | 38 |
| Stage three – NMPCC..... | 38 |
| Stage three – AMPR | 38 |
| 3.2.4 Stage four – Data gathering and excluding located LTMPs | 39 |
| Stage four – Online search strategy | 40 |
| Stage four – NMPCC | 42 |
| Stage four – AMPR..... | 42 |
| 3.2.5 Part I – Summary | 43 |
| 3.3 Part II – Dataset design | 43 |
| 3.3.1 Dataset cleaning | 46 |

| | | |
|-------------------|---|------------|
| 3.3.2 | Additional information..... | 47 |
| 3.3.3 | Part II – Summary | 47 |
| Chapter 4 | Dataset | 49 |
| 4.1 | Data Collection and Pre-Processing..... | 49 |
| 4.2 | Australia – Source Websites | 50 |
| 4.3 | Understanding the two source websites | 52 |
| 4.3.1 | NMPCC..... | 53 |
| 4.3.2 | AMPR | 53 |
| 4.3.3 | NMPCC/AMPR | 54 |
| 4.4 | Understanding Calculated Age (based on DOB) | 54 |
| 4.5 | Additional data collection sources | 55 |
| 4.6 | Characteristics | 56 |
| 4.7 | Characteristics – Major | 57 |
| | Jurisdiction | 57 |
| | Calculated age | 57 |
| | Reported age | 58 |
| | Gender | 58 |
| | Ethnicity | 58 |
| 4.8 | Characteristics – Minor | 59 |
| | Date disappeared | 59 |
| | Day of the week disappeared | 60 |
| | Month disappeared..... | 61 |
| | Year disappeared | 62 |
| | Month born and month disappeared..... | 64 |
| | Coronial investigation | 65 |
| 4.9 | Summary | 66 |
| Chapter 5 | Results..... | 67 |
| 5.1 | Introduction..... | 67 |
| 5.2 | Australia – Major Characteristic (<i>Jurisdiction</i>) | 68 |
| 5.3 | Australia – Major Characteristic (<i>Age Disappeared</i>) | 72 |
| 5.4 | Australia – Major Characteristic (<i>Gender</i>) | 76 |
| 5.5 | Australia – Major Characteristic (<i>Ethnicity</i>)..... | 78 |
| Chapter 6 | Discussion | 85 |
| 6.1 | Introduction..... | 85 |
| 6.2 | Data collection | 86 |
| 6.3 | Results..... | 86 |
| 6.4 | Limitations | 91 |
| Chapter 7 | Overview/Summary | 96 |
| References | | 100 |
| | APPENDIX A Additional identified characteristics | 112 |
| | APPENDIX B Exact DOB..... | 114 |
| | APPENDIX C Month and year only DOB | 115 |
| | APPENDIX D Year only DOB | 116 |
| | APPENDIX E Reported Age..... | 117 |
| | APPENDIX F Ethnicity determination | 118 |
| | APPENDIX G Long-term missing person ethnicity matched to ABS ASCCEG category | 119 |
| | APPENDIX H Year disappeared for all LTMPs in study..... | 120 |

| | | |
|------------|--|-----|
| APPENDIX I | ACT – Year and jurisdiction disappeared | 121 |
| APPENDIX J | NSW – Year and jurisdiction disappeared..... | 122 |
| APPENDIX K | NT – Year and jurisdiction disappeared | 123 |
| APPENDIX L | QLD – Year and jurisdiction disappeared | 124 |
| APPENDIX M | SA – Year and jurisdiction disappeared | 125 |
| APPENDIX N | TAS – Year and jurisdiction disappeared..... | 126 |
| APPENDIX O | VIC – Year and jurisdiction disappeared..... | 127 |
| APPENDIX P | WA – Year and jurisdiction disappeared..... | 128 |
| APPENDIX Q | Expanded version of Table 4–4 | 129 |
| APPENDIX R | Long-term missing persons categorised based on ABS ASCCEG | 129 |
| APPENDIX S | ABS ASCCEG and LTMP ethnicity count | 132 |
| APPENDIX T | ABS Ancestry by state/territory descriptions expanded version of Table 5–3..... | 141 |
| APPENDIX U | Access to ANZPAA policy on missing persons..... | 144 |
| APPENDIX V | Best practices document credibility list..... | 147 |

LIST OF FIGURES

| | |
|--|-----------|
| Chapter 1 Introduction..... | 6 |
| 1.7 Structure | 14 |
| Figure 1–1 Long-term missing person dataset creation process: collection, cleaning, and analysing. | 15 |
| Chapter 2 Literature review | 16 |
| 2.4 Cause of disappearance: Unintentional/Escape/Dysfunctional..... | 24 |
| Figure 2–1 The Missing Continuum, adapted from Biehal, Mitchell, and Wade (2003) [37]. | 25 |
| Chapter 3 to Chapter 5..... | 31 |
| Figure 3–1 Overview of thesis steps found in Chapter 3 to Chapter explaining data collection process, data cleaning process and results. | 31 |
| Chapter 4 Dataset | 49 |
| 4.1 Data Collection and Pre-Processing..... | 49 |
| Figure 4–1 Distribution of LTMPs from source websites, NMPCC, AMPR, and NMPCC/AMPR, and count of those excluded from study. | 50 |
| 4.2 Australia – Source Websites | 50 |
| Figure 4–2 Distribution of unlisted, excluded, and included LTMPs as profiled on NMPCC or AMPR, and NMPCC/AMPR based on the approximate 2,600 who have yet to be located. | 51 |
| 4.4 Understanding Calculated Age (based on DOB) | 54 |
| Figure 4–3 Birth date counts of LTMPs where exact, year only, month/year have been located and those unknown. | 55 |
| 4.8 Characteristics – Minor | 59 |
| Date disappeared | 59 |
| Figure 4–4 Disappeared date counts of LTMPs where exact, year only, month/year have been located and those unknown. | 60 |
| Day of the week disappeared | 60 |
| Figure 4–5 Totals of the days of the week when LTMPs were considered to have disappeared. | 61 |
| Month disappeared..... | 61 |
| Figure 4–6 Totals of the months of the year when LTMPs were considered to have disappeared. | 62 |
| Year disappeared | 62 |
| Figure 4–7 Year ranges of when LTMPs were considered to have disappeared..... | 63 |
| Month born and month disappeared..... | 64 |
| Figure 4–8 Matching birth month and disappeared month of LTMPs. | 65 |
| Coronial investigation | 65 |
| Figure 4–9 Counts of Coroner’s reports on LTMPs..... | 66 |
| Chapter 5 Results..... | 67 |
| 5.2 Australia – Major Characteristic (<i>Jurisdiction</i>) | 68 |
| Figure 5–1 All Australian jurisdictions. | 68 |

| | | |
|-----|--|----|
| | Figure 5–2 Long-term missing person counts for all Australian jurisdictions. | 70 |
| | Figure 5–3 Comparison of ABS ERP counts and LTMP counts for all Australian jurisdictions. | 70 |
| | Figure 5–4 Proportional comparison between ABS ERP and LTMP to determine the jurisdictional order from highest to lowest. | 71 |
| 5.3 | Australia – Major Characteristic (<i>Age Disappeared</i>) | 72 |
| | Figure 5–5 Calculated variance between calculated age and reported age where there is a discrepancy in age. | 74 |
| | Figure 5–6 Comparison of ABS ERP average and LTMP average for all Australian jurisdictions. | 76 |
| 5.4 | Australia – Major Characteristic (<i>Gender</i>) | 76 |
| | Figure 5–7 Gender counts..... | 77 |
| | Figure 5–8 ABS ERP and LTMP gender count comparisons. | 77 |
| 5.5 | Australia – Major Characteristic (<i>Ethnicity</i>)..... | 78 |
| | Figure 5–9 LTMP gender counts..... | 80 |

LIST OF TABLES

| | |
|--|-----------|
| Chapter 2 Literature review | 16 |
| 2.1 Background | 16 |
| Table 2–1 Adapted from James, Anderson, and Putt (2008) [6, p. 152], Identified Australian law enforcement DMS and available missing person data. | 19 |
| Table 2–2 Law enforcement data management systems found in James, Anderson, and Putt, 2008 study [6] and compared to systems used in 2020..... | 20 |
| 2.2 Missing Person Profile | 21 |
| Table 2–3 Key findings relating to characteristics of missing persons and LTMPs from Bricknell and Renshaw (2008–2015) study [39].. | 22 |
| Chapter 3 Methodology | 32 |
| 3.2 Part I – Data Collection..... | 33 |
| 3.2.2 Stage two – Identification of LTMPs from source websites | 35 |
| Stage two – NMPCC | 35 |
| Table 3–1 NMPCC LTMP jurisdiction categories..... | 36 |
| Stage two – AMPR | 36 |
| Table 3–2 AMPR LTMP categories..... | 37 |
| Table 3–3 Calculated number of unique LTMPs found on AMPR source website..... | 37 |
| 3.2.3 Stage three – Inclusion and exclusion of LTMPs | 37 |
| Stage three – Exclusion criteria | 38 |
| Table 3–4 Initial inclusion and exclusion criteria for cross-sectional LTMP study. | 38 |
| 3.2.4 Stage four – Data gathering and excluding located LTMPs | 39 |
| Stage four – Online search strategy | 40 |
| Table 3–5 Possible missing information from LTMPs profiles. | 40 |
| Table 3–6 Alternative name search options for LTMPs..... | 41 |
| Table 3–7 Additional online sources accessed for LTMP data collection purposes..... | 41 |
| Table 3–8 Coroner reports/findings source locations..... | 42 |
| 3.3 Part II – Dataset design | 43 |
| Table 3–9 Major and minor characteristics of LTMPs..... | 43 |
| Table 3–10 Source websites/webpages reliability precedence order. | 45 |
| Chapter 4 Dataset | 49 |
| 4.2 Australia – Source Websites | 50 |
| Table 4–1 Summary of data collected. | 52 |
| 4.3 Understanding the two source websites | 52 |
| 4.3.3 NMPCC/AMPR | 54 |
| Table 4–2 Summary of excluded data. | 54 |
| 4.4 Understanding Calculated Age (based on DOB) | 54 |
| Figure 4–3 Birth date counts of LTMPs where exact, year only, month/year have been located and those unknown. | 55 |
| 4.5 Additional data collection sources | 55 |

| | | |
|-----|--|-----------|
| | Table 4–3 Document credibility and precedence order of data from source websites and additional websites/webpages..... | 56 |
| 4.8 | Characteristics – Minor..... | 59 |
| | Year disappeared | 62 |
| | Table 4–4 Based on LTMP cases in each jurisdiction, the % increase or decrease when compared to the previous five years over a 10 year period..... | 64 |
| | Month born and month disappeared..... | 64 |
| | Table 4–5 Australian National Public Holidays [97]. | 64 |
| | Chapter 5 Results..... | 67 |
| 5.2 | Australia – Major Characteristic (<i>Jurisdiction</i>) | 68 |
| | Table 5–1 Ratio of LTMP to jurisdiction population (<i>1:n, n^1000</i>) from lowest to highest..... | 72 |
| 5.3 | Australia – Major Characteristic (<i>Age Disappeared</i>) | 72 |
| | Table 5–2 ABS age ranges and associated terminology. | 73 |
| 5.5 | Australia – Major Characteristic (<i>Ethnicity</i>)..... | 78 |
| | Table 5–3 Detailed list of ethnicities..... | 83 |

Key Terms

| Acronym/Term | Meaning | Explanation |
|--------------|--|--|
| ABS | Australian Bureau of Statistics | Australian Federal Government agency |
| ACIC | Australian Criminal Intelligence Commission | Australian Federal Government agency [1] |
| ACT | Australian Capital Territory | Jurisdiction (aka Australian territory) |
| AFP | Australian Federal Police | Australian Federal Government agency |
| AMPR | Australian Missing Persons Register | Private source website [2] |
| ANZAC | Australian and New Zealand Army Corps | ANZAC Day is a public holiday that generally commemorates all Australian and New Zealanders who passed due to war, conflicts and/or peacekeeping operations. |
| ANZPAA | Australia New Zealand Policing Advisory Agency | State Government Other Unincorporated Entity. Another unincorporated entity is a number of people grouped together by a common purpose with club-like characteristics, for example, a sporting club, social club or trade union [3]–[4] |
| ASCCEG | Australian Standard Classification of Cultural and Ethnic Groups | ABS term |
| Austlii | Australasian Legal Information Institute | Austlii is a joint facility of the University of Technology Sydney (UTS) and University of New South Wales (UNSW) Faculties of Law online legal research facility [5] |
| Border Force | Australian Border Force | Australian Federal Government agency |
| CALD | Culturally and linguistically diverse | People from culturally and linguistically diverse backgrounds [6] |
| COPS | Computerised Operational Policing System | New South Wales (NSW) law enforcement single event orientated system, designed to record, review, and manage all criminal cases logged [7]–[8] |
| CPIC | Canadian Police Information Centre | Included in study Sekela, Plecas, and Cohen 2010 Canadian Study "A review of uncleared missing person cases and police responses in Alberta" [9] |
| DOB | Date of birth | Term used in thesis figures |
| DMS | Data management system/s | Software designed as a repository for collecting, storing, and retrieving data from databases. |
| ERP | Estimated Resident Population | ABS term [10]. |
| IMS | Incident Management System | Western Australian (WA) law enforcement system that records incidents and offences [8], [11]–[14] |
| JCU | James Cook University | Australian university located Queensland (QLD), Townsville |
| LEAP | Law Enforcement Assistance Program | Victoria (VIC) law enforcement record management system (database) for recording interactions between the and the public [8], [12], [15]. |
| LTM | Long-term missing | Thesis term |
| LTMP/LTMPs | Long-term missing person(s) | Thesis term |
| MPAN | Missing Persons Advocacy Network | Not-for-profit organisation who advocates for change by reframing missing persons into community concern which opens avenues for those affected to seek and receive support [16]–[17] |
| NamUs | National Missing and Unidentified Persons System | A United States of America (USA) system that is a nationwide information clearinghouse offering free, secure, easy-to-use, online technology to help expedite case associations and resolutions [18] |
| nec | not elsewhere classified | Term applied by ABS in ethnicity descriptions |
| nfd | not further defined | Term applied by ABS to ethnicity descriptions |
| NGO/NGOs | Non-government organisation(s) | Organisation(s) that are independently owned and operated and have no affiliation with local, state and/or federal government. |
| NMPCC | National Missing Persons Coordination Centre | Non-operational arm of the Australian Federal Police (AFP) [19] |

Key Terms *(cont.)*

| Acronym/Term | Meaning | Explanation |
|--------------|---|---|
| NMPU | National Missing Persons Unit | AFP agency that existed prior to absorption into the National Missing Persons Coordination Centre in 2006 [19] |
| NPRS | National Police Reference System | Database developed by Australian Criminal Intelligence Commission (ACIC) [20] |
| NSW | New South Wales | Jurisdiction (aka Australian state) |
| NT | Northern Territory | Jurisdiction (aka Australian territory) |
| ORS | Offence Recording System | Tasmanian (TAS) law enforcement data Incident level information is recorded [12] |
| PDF file | Portable Document Format file | PDF file is a common term used to describe to documents that can be read and exchanged regardless of software, hardware, or operating system, as defined by Adobe |
| PIMS | Police Information Management System | South Australian (SA) law enforcement incident recording and retrieving system [8], [12] |
| Pnsn | Persons | ABS terminology [21] |
| PROMIS | Police Realtime Online Management Information System | Australian Capital Territory (ACT) Policing's central management system, the AFP's recording system for all crime, incidents, and offences [8], [22] |
| QLD | Queensland | Jurisdiction (aka Australian state) |
| QPRIME | Queensland Police Records and Information Management Exchange | Record management system (database) for recording interactions with QLD law enforcement and the public [8], [23]–[24] |
| RCMP | Royal Canadian Mounted Police | Included in study Sekela, Plecas, and Cohen 2010 Canadian Study "A review of uncleared missing person cases and police responses in Alberta" [9] |
| RTI Act | Right to Information Act, 2009 | Legislation |
| SA | South Australia | Jurisdiction (aka Australian state) |
| SerPro | Serve and Protect | Northern Territory (NT) system (in development) to support delivery of frontline police services [25]–[26]. |
| TAS | Tasmania | Jurisdiction (aka Australian State) |
| UK | United Kingdom of Great Britain and Northern Island | Country made up of (England, Scotland, Wales, and Northern Ireland) |
| UNSW | University of New South Wales | Austlii is a joint facility of the UTS and UNSW Faculties of Law online legal research facility [5] |
| URL | Uniform Resource Locator | Terminology relating to web address |
| UTS | University of Technology Sydney | Austlii is a joint facility of the UTS and UNSW Faculties of Law online legal research facility [5] |
| VIC | Victoria | Jurisdiction (aka Australian state) |
| WA | Western Australia | Jurisdiction (aka Australian state) |

Acknowledgments

I begin by acknowledging the Traditional Custodians of the land on which this study is focused and pay my respects to their Elders past and present. I extend that respect to Aboriginal and Torres Strait Islander peoples who are considered long-term missing and have been included in this study.

I would like to thank you, my primary advisor, Dr Dianna Hardy for the many hours you spent providing the much-needed emotional support and knowledge required to complete this study.

I would like to thank you, my secondary advisor, Prof Ickjai Lee for teaching me to look at information in new and unique ways.

To both Dr Dianna Hardy and Prof Ickjai Lee, thank you for your wisdom, patience, and the constant reminder that information is more than just stuff of interest, it is the foundation from which all knowledge is derived.

To those I consider are my family who were there during crucial times be it the study grunt work or personal crisis, Rachael C (who was there for both), Trisha M, Marisa P, Liam J, David P, and Linton A. Thank you so much, I am truly indebted to you.

Like Rachael C, a huge thank you to Cassie K, who, when called, came to the rescue, by helping me organise the approximate 4,500 additional documents on the long-term missing.

To Dr Garry Coventry, from the first time we met, I thank you for always encouraging me to pursue a career in academics.

To Molly who provided comical relief, and Mardy, who, without complaint, spent many all-nighters by my side, you both will never know how important you have been to me.

Finally, to my mum, who passed away in 2001, I will never forget you. You were and are the most important person I have ever had in my life. Feliz cumpleaños for the 19th.

All these wonderful, beautiful, and intelligent individuals have contributed, directly or indirectly, to this study. And all deserve to be recognised for the importance they have had on my life and to the future of my research into long-term missing persons.

Financial assistance was provided by the Australian Government Research Training Program Scholarship Australian Government's which included the RTP Fee Offset support.

Acknowledging long-term missing persons and those affected

Unfortunately, knowing a family who's loved one vanished over forty years ago, I have seen firsthand the emotional impact this ambiguous loss takes on those left behind. Those who care have waited and are still waiting for answers as to who, where and why and for their mother, daughter, sister, grandmother, aunt, cousin, and friend to come home. For some, it is too late to get answers and see their lost one brought home, or even know what happened while those who are still here are left wondering and may wonder forever.

Although this is just one story from one family, the reality is this could become the history of any who disappear and remain unlocated.

Finding those who become long-term missing is more than bringing closure to those living in a limbo of unknowing, it is allowing those suffering to have certainty. Certainty provides family and loved ones the opportunity to adjust to a future in which they know what became of the person they have missed for so long.

This study is about figures and data, however behind all that information are real people with real family and friends with real feelings of loss. I am so sorry that those left behind are suffering so greatly, but I want you to know that as a researcher I truly acknowledge your grief. I hope that this study encourages more research into the field of long-term missing persons which ultimately leads to developing improved tools, and better resource allocation to those on the frontline of investigating disappearances.

For those who choose to leave, for whatever reason, please contact your local law enforcement agency and let them or someone else know you are safe.

For those whose choice was stolen, the message to those left behind, please know I and future researchers are driven by the desire to provide knowledge on which outcomes of certainty can be realised.

No bodies will always be somebodies to the people who have loved and then lost them.

Abstract

In 2020, it was estimated that the number of missing persons reported to law enforcement in Australia exceeded 38,000. Around 98% of those individuals on file were located within a few hours to a couple of weeks of their reported disappearance. Some people however vanish and remain so for months, years, or longer. Currently Australia has around 2,600 persons that fall into the unlocated category. Individuals who remain unlocated for extended periods of time are referred to as “*Long-Term Missing Persons*” (LTMPs). Research on both missing and LTMPs is limited. Over the past two decades world-wide, there have been less than 150 studies on missing persons, and fewer than ten on LTMPs. Although information on missing persons is sparse, what has been observed is that different characteristics exist between those who are located quickly and those that become long-term missing. Females from 13 to 17 years of age are at the highest risk of going missing however males between 30 and 40 years of age tend to remain unlocated. Furthermore, what has been consistent throughout all the studies on those missing are two key points: a) more research is required and b) data held by third parties on LTMPs is often inaccessible, limited, non-existent, and/or rogue (inconsistent). Identifying these two core issues provided the rationale to investigate what options were available to researchers to address these problems. This exploratory study examined if accessing publicly available data on selected Australian listed LTMPs, held enough reliable data to be analysed to identify patterns of significance and thereby adding to our understanding of this group.

A primary contribution of this study was the creation of a previously unavailable dataset of LTMPs in Australia. Information was primarily gathered from two websites, the National Missing Persons Coordination Centre (NMPCC) (federal government funded) and the Australian Missing Person Register (AMPR) (not-for-profit privately funded). Neither of the websites provide a data export option, so the information was manually entered into an Excel file and thereby generating the dataset. The data was then pre-processed to eliminate duplicates and to rationalise inconsistencies between the reported data. The combined set of data was created resulting in entries 1,067 individual long-term missing persons. An extensive internet search was then performed for mentions of each of the LTMPs in Coroner’s reports, public social media posts, newspapers, blogs and other online media sources from over 6,700 websites and webpages and this data was used to resolve inconsistencies in the novel dataset. This process was also used to eliminate 24 long-term missing persons who were listed had located or resulted in exclusion due to no law enforcement jurisdiction identified. The final number of individuals included in the resulting dataset was 1,043.

Using the created dataset, univariate analysis of four characteristics (jurisdiction, age disappeared, gender, and ethnicity) was performed. These results were also divided into jurisdiction. The four characteristics chosen had been identified in earlier studies pertaining to uncleared/outstanding missing persons. This study found that Victoria had a disproportionately lower number of LTMPs compared to all other states and territories. The results showed confirmed that Caucasian males aged from 30 to 40 years old were most at risk of becoming a LTMP compared to short term missing persons which tended to be Caucasian females 13 to 17 years of age. Statistically, the average age of long-term missing persons at the time of their disappearance tended to be closer to 40 years old. Finally, Indigenous Australians were approximately four times more likely to remain unlocated than non-Indigenous persons. These results, excluding jurisdiction, closely matched the three separate studies carried out by the earlier international researchers. This dataset generated from online sources corresponded and supported the results generated from analysis reported in academic literature when performed on privately held repositories. Using online data sources, this research was able to demonstrate what types of data were available to researchers from the Internet and that it could be an alternative source of information as opposed to relying solely on third party providers.

The findings from this study suggest that use of online sources for data collection on LTMPs can produce a robust and accessible dataset which can provide significant insights. The consistency of results of the analysis of the data from publicly available or Internet sources with that reported in the literature, suggests that information from unofficial data sources can be used to supplement and/or fill in gaps present in officially published findings. Factors that impeded the ability for a more in-depth analysis related to time duration, i.e., 18 months to create the dataset prior to analysis. Ongoing issues were found in the accuracy of ethnicity data which was frequently inconsistent. These issues however may be addressed in future studies on LTMPs if a more collaborative approach was taken between third parties and researchers. A possible solution could be the creation of an open access non-compulsory database. Such a reporting system would allow the public and third parties to provide new and additional information on known or suspected LTMPs. Any omitted and or conflicting data could be addressed by engaging with law enforcement and non-government organisations to supply specifically required data. An avenue of this type may afford both law enforcement and researchers access to data previously unattainable due to perceived privacy and LTMP case sensitive reasons.

Key Words – Missing in Australia, Australian Missing Persons Register, Australian, long-term missing persons, National Missing Persons Coordination Centre, jurisdiction, age, gender, ethnicity

CHAPTER 1

INTRODUCTION

1.1 Motivation

In Australia, the phenomenon of missing persons is a significant issue, with an average of 38,000 (2020) [27], increasing to 51,000 (2021) [28] individuals being reported missing to law enforcement each year. The majority of these individuals, approximately 98%, are located within a relatively short period of time [27]. The remaining 2% however are classified as long-term missing, defined as individuals who have been absent without contact for a period of three months or longer [27], [29]. This translates to approximately 1 in 50 reported missing individuals being at risk of remaining unlocated for an extended period of time.

The management and tracking of missing persons in Australia are currently conducted through the use of law enforcement databases, which are maintained separately by each state and territory [30]. These databases are designed to be manually updated by law enforcement officers, in accordance with the specific state or territory's recognised legislation, policies, and procedures. These databases are primarily used as tools for collecting information on cases and individuals to aid in investigations. Generally, information held by law enforcement is unavailable to external researchers unless, through vetting, approval has been granted.

The study of missing and LTMPs in Australia has been an area of ongoing yet limited research. Most studies have applied an inductive modelling approach, analysing the information provided by law enforcement in order to understand the risk factors associated with disappearances. Results have revealed that the underlying causes of disappearances can range from escaping personal or criminal circumstances, to neurocognitive disorders and third-party involvement [30]–[35]. For a large number of LTMPs the exact cause of their disappearance remains undetermined. The impact of disappearances on both the missing individuals and their loved ones is significant, prompting the need for further research to better understand this phenomenon and to minimise the negative impact on those affected.

1.2 Background

The missing and LTMPs phenomenon both in Australia and internationally, has been reported by academics as under-researched. In Australia, a person is considered long-term missing when they have remained missing for longer than three months [18]. Over the past two decades, less than 150 studies world-wide have focussed on missing persons, and only three studies [9], [31]–[32] (all international) have investigated LTMPs. Missing persons overall is an area that has received minimal attention, with long-term missing persons (LTMPs) being even less explored. What little is known about LTMPs such as who is at risk and what are commonly seen characteristics, are from studies over ten years old [9], [31]–[32]. Those studies found that males whose ages ranged from 30 to 40 years old were more at risk of going missing, and that minority ethnicities were overrepresented [9], [31]–[32], and Indigenous populations were overrepresented [9], [32].

Research into missing and LTMPs is a relatively new field of study. It has long been understood that some of the reasons for people going missing can be attributed to their location, political beliefs and even the desire to avoid prosecution or incarceration [33]–[42]. Missing persons have multiple subcategories including enforced/forced disappearances, i.e., state sanctioned/supported, natural/human-made disasters i.e., severe weather events, human trafficking, absconders (escaping or avoiding legal action and institution incarceration) [33]–[45] and LTMPs. While this study focuses on LTMPs, there are also other less recognised categories worth noting, “*johatsu*” and “*the missing missing*” [43], [46]–[47].

“*Johatsu*” (aka “evaporated people”), is generally considered to be a Japanese phenomenon, i.e., individuals choosing to leave family and/or work commitments due to financial and/or societal pressures and evaporate by taking on a new identity [47]. *Johatsu* is understood to be the result of cultural shame as opposed to wanting a life change [47]. The term “*the missing missing*” refers to those that are considered here until others realise, they in fact “are not”. Quinten [43] states “*unless bodies are found the missing missing do not exist*”. People who may fall into “*the missing missing*” subcategory are often considered by society to be “*less dead*”, which Hickey (2013) defined as individual considered by society as less important than people who have passed away [48]. People who are often considered less dead include the homeless, transients, sex workers, addicts, and those with neurocognitive disorders. Quinten, 2007 expanded the missing missing to also include foster children [43]. In the USA, most state privacy laws protect details about children in foster care from being publicly released. These same laws are in force even when foster children vanish resulting in their disappearance from both society and the system designed to protect their citizens [43]. *Johatsu* and the missing missing are dynamic as subcategories being they can shift between belonging

to missing persons in general to a LTMP. Any person within any of the subcategories can be considered long-term missing, however the term generally relates to those who vanish without any explanation and for an extended period.

Researchers have attempted to expand upon the axiom that missing persons are a world-wide phenomenon, no group or individual is immune from going missing, and people who go missing do so voluntarily or involuntarily. Since 1988, researchers have begun to dissect these assumptions in an attempt to fill in the knowledge gaps to provide a greater insight into the who, how, what, when, where and why.

What has appeared in the literature about missing and LTMPs appears to be relatively consistent when comparing Australian and international studies. Australian researchers have suggested that most missing persons are located within days to a few weeks [6], [27], [49], other studies from international researchers, indicate similar results [31], [50]–[51]. A common finding both in Australia and overseas, is that on average, 98% of those missing are found shortly after their disappearance is reported. The remaining ~2% become part of the long-term missing or that country's equivalent to a LTMP [27], [38]. Another similar outcome is that those that go missing (short term) tend to be females between the ages of 13 to 17 years old [6], [35], [38]–[39], [51] while adult males are more likely to be at risk of becoming a LTMP. Australian research alludes to males who are older tending to remain unlocated or if found are deceased [39]. International research supports this position, however, lists the age range between 30 to 40 years old, and generally closer to 40 years old for those untraced males [9], [31]–[32].

Ethnicity of the long-term missing is another characteristic reported in international studies, however appeared to be excluded from most Australian studies when unlocated individuals are commented upon. International studies found that ethnic minorities were statistically overrepresented when evaluated against all the general population and LTMPs in the geographical study area [9], [31]–[32]. Without accurate missing and LTMPs data, gaining insight into characteristics such as age, gender and ethnicity becomes more difficult for both researchers and authorities who rely on evidence-based research for effective policy development.

The focus of this study is on those categorised as long-term missing; individuals who were reported missing to Australian law enforcement while in Australia and who, after three months remained unlocated. With only three international studies over a decade old available on the long-term missing, it would be remiss to assume any results would be unchanged and relevant to Australia in 2020. To determine if there has been any shift in findings over the past ten years, three of the characteristics, age disappeared, gender and ethnicity will be compared against the studies of 2005, 2008, and 2010.

1.3 Research Problem

Australian and international literature on missing and LTMPs, discuss two main areas of concern. The first issue highlighted in the majority of studies, relates to the limited amount of research on missing persons overall. Academics focusing on understanding the issues surrounding missing persons have reiterated the need for more research. Researchers have indicated that with greater knowledge comes better decision making [31] i.e., policy development and resource allocation for both law enforcement agencies and non-government organisations (NGOs), for example Missing Persons Advocacy Network (MPAN) [16]–[17]. The other concern raised by researchers pertains to missing persons data. Limitations noted by Australian researchers relate to data accessibility hurdles, and if obtained, the integrity of that data. Issues of inconsistent or arbitrary data entry, missing or incorrect recording of missing persons characteristics and incompatible data management systems (DMSs) between jurisdictions for data sharing or entry consistency [6], [38]–[39] e.g., Queensland Police Records and Information Management Exchange (QPRIME) compared to Victorian Law Enforcement Assistance Program (LEAP) [6], [8], [12], [15], [23]. Of the eight law enforcement jurisdictions in Australia, James, Anderson, and Putt (2008) [6] listed only seven DMSs from which their data was derived. International studies raised similar problems when analysing data on missing and LTMPs, however overseas researchers focussed on concerns of data inaccuracy and incompleteness rather than access difficulties [9], [52]–[53].

The data obtainability concerns raised in the literature from Australian studies, fails to be replicated to the same degree by international researchers, i.e., datasets appear to be more readily accessible to overseas academics. Universally however, researchers are in consensus about missing persons and any identified subcategories are under-researched, while issues surrounding data quality and wholeness, obfuscates results possibly derived from more accurate datasets.

Prior to the late 1980's, the majority of research on missing persons related to missing, kidnapped and exploited children/adolescents, runaways, or individual cases of unlocated individuals. It was only in 1988, that researchers truly began to focus their attention on investigating who, why and how people in general go missing [54]. The study by Hirschel and Lab in 1988 [44], looked at one American city and its data on missing persons. Although LTMPs were mentioned, the results targeted those that were eventually located. The findings however, provided some insight into those at risk and the causes, while also highlighting the need for more research [44]. A more intensive study was released in the same year by Australian researchers, Swanton et al. [36] and looked at individuals missing across Australia. Both studies, in addition to other characteristics, also analysed the same two common

demographics, gender, and age. Their results, very broadly, appeared to identify the same issues as seen in Hirschel and Lab [44]. For missing persons who were reported to law enforcement, statistically the most prevalent were young females who intentionally went missing, often relating to perceived and/or real issues in the home. The results of the two studies also paralleled each other, in that most missing persons were located after a relatively short absence. Additionally, the same limitations around data were observed in each of the studies, that data regarding missing persons was limited, incomplete, inaccurate, or non-existent. The one notable difference with the Australian study is that the authors showed pointed concern in relation to the lack of data and knowledge around the “*untraced*” (now termed as LTMPs).

Between 1988 and 1997, no studies could be found on either missing persons or specifically LTMPs. In 1997 however, the concerns raised in the 1988 studies in which it was noted that missing persons was an overlooked topic by academics, was being addressed, albeit slowly. In that year Australian researchers, Henderson and Henderson [35], carried out further studies, which predominately focused on age, and gender. Again, the results appeared similar to the earlier research, including identifying similar limitations. This study was also instrumental in developing descriptive terms to explain a person’s disappearance [35]. Earlier researchers referred to voluntary and involuntary, however these definitions imply that all persons missing, are aware they are missing, or external factors, excluding nefarious choices by others, fail to contribute to a person’s decision to leave. The redefining of the terms voluntary and involuntary to intentional and unintentional, started appearing in studies after 1997.

From 1997 research into missing persons began to gain traction in the academic world. Many of those works however dealt with missing persons in general and often focussed on a particular group, such as children or the elderly. Even though more research was being carried out, by mid-2022, there were still less than 150 published studies worldwide on missing and/or LTMPs. Of those studies, three expanded upon the causal terminologies [37], [50], [55], and three specifically dealt only with LTMPs [9], [31]–[32] as opposed to mentioning LTMPs as an aside [38].

The three studies discussing terminology were carried out in 2003 [37], 2016 [50] and, 2020 [55]. The 2003 research demonstrated that intentional and unintentional states were fluid in nature as opposed to static [37]. The 2016 study further expanded the terminology by removing intentional and replacing it with escape and creating a sub-behavioural theme, dysfunctional [50]. Dysfunctional often relates to a form of neurocognitive disorders, substance-related and addictive disorders [56]. The last insight into the behavioural themes was carried in 2020, however this study excluded dysfunctional as a cause of a person’s disappearance [55].

The studies focusing only on LTMPs were carried out by Newiss (2005) [31], Cohen, McCormick, and Plecas (2008) [32] and Sekela, Plecas, and Cohen (2010) [9]. These studies found adult males were more likely to remain unlocated for extended periods of time, if found at all, and ethnic minorities were overrepresented. While Cohen, McCormick, and Plecas (2008) [32] and Sekela, Plecas, and Cohen (2010) [9] identified that the Indigenous population were also overrepresented. Again, similar limitations of access to complete and accurate data were identified as a key issue. This concern can be seen recurringly in all studies pertaining to missing and LTMPs. Studies in the United Kingdom (UK) in 2005 [31], and Canada in 2008 [32] and 2010 [9] each outlined four recurrent characteristics: jurisdictions (where person went missing), age at time of disappearance, gender, and ethnicity. These four common characteristics were found in most Australian and international missing person studies. This study carried out descriptive analysis on these same four characteristics, although jurisdiction is specific to Australia.

This approach of collecting data and then analysing that data from public records is aimed at benefiting researchers in future studies on LTMP. Demonstrating that data can be independently and reliably gathered from online sources will limit the need for those interested in researching LTMP needing to access law enforcement or other third party held data.

1.4 Aims and Objectives

The purpose of this study is to investigate the potential of online sources as a reliable and cross-checkable means of gathering information on LTMPs in order to expand our understanding of this phenomenon. The study addresses two main aims: firstly, to develop a dataset on LTMPs that could be made available to researchers for analysis purposes on LTMPs, and secondly, to determine whether publicly available data can provide enough information to supplement our current knowledge and potentially minimise the need to obtain data from third parties.

The study's objectives are to expand our knowledge on LTMPs through the use of online public available data by:

1. Establishing what online information is available on individuals who disappeared while in Australia, and who are now considered a LTMP; and
2. Evaluating the effectiveness of using the data from online sources to identify patterns, if any, of significance of those LTMPs who originally went missing in Australia; and
3. Discuss how using online information on LTMPs can address or minimise known data access and integrity issues.

The objectives of this study raised three questions:

RQ1. What personal data is publicly available on individuals identified as missing long-term in Australia?

RQ2. How can publicly available data be analysed to identify patterns of significance, if any, about those identified as missing long-term in Australia?

RQ3. How can using publicly available data address issues of data integrity compared to having data provided by third parties?

1.5 Significance

This research aims to make two key contributions to the field of LTMPs investigations. The first is to assess the usefulness of online data in conducting such studies and to demonstrate the advantages of utilising publicly available online information as opposed to relying solely on data provided by external sources.

What personal data is publicly available on individuals identified as missing long-term in Australia?

The literature on missing individuals, both short-term and long-term, typically relies on third-party data sources. In contrast, this study takes the approach that publicly available online data can provide a wealth of information pertaining to LTMPs and their cases. To assess the validity of this assumption, over 6,700 websites were analysed to gather information on LTMPs. After reviewing the data, it was determined that more than 140 characteristics (Appendix A) could be identified from online sources. This study subsequently focused on four key characteristics: the Australian law enforcement jurisdiction responsible for the case, the age at which the individual disappeared, gender, and ethnicity. The analysis revealed that online sources yielded 80% to 100% of the necessary data to populate the dataset. While further research is needed to determine if the minimum 80% can be established as a benchmark for all relevant characteristics pertaining to a specific individual, this preliminary study does demonstrate that online information is a viable source of data.

How can publicly available data be analysed to identify patterns of significance, if any, about those identified as missing long-term in Australia?

The use of descriptive analysis revealed patterns of frequency, central tendency, dispersion, and position in regard to the number of unlocated individuals in each jurisdiction, as well as gender and ethnicity counts. The average age of those who went missing was determined through the calculation of central tendency, while the age range was established by measuring the dispersion of LTMPs. These findings, with the exception of jurisdiction, were able to be compared against the outcomes of the three existing studies on LTMPs. Furthermore,

all four characteristics were compared against Australian Bureau of Statistics (ABS) data. The results of this analysis, excluding age, showed little correlation with the ABS population data, however, the findings closely replicated those of three international studies. This supports the idea that data from online sources can both identify patterns and be used to validate or refute previously identified patterns of significance found, relating to individuals who are identified as missing long-term in Australia.

How can using publicly available data address issues of data integrity compared to having data provided by third parties?

This study has demonstrated that utilising online data sources can provide a wealth of information for analysis, revealing patterns of significance. By highlighting various methods of data collection, researchers have the freedom to conduct studies without relying on third-party sources. This minimises the limitations and restrictions imposed by third-party data providers, such as missing or inaccurate information, data ownership, and publication caveats. Furthermore, this approach allows researchers to cross-check data for errors and eliminates the need for special authority to access data. This both reduces data availability bias and expands the number of researchers who can conduct analysis. This study considered the use of a web crawler. Web crawlers determine the likelihood of webpages that may have relevant information. This raised concerns that information on LTMP would be missed or incorrect. Additionally, using web crawlers would still require manual reviewing of all identified webpages. The process of carrying out further manual searches to ensure the web crawlers had captured necessary data, and reviewing the data sourced by those web crawlers was considered an ineffective process. As this was an exploratory only study to establish if publicly available data could be used for analysis, minimal analysing was applied to the data i.e., skewness was not evaluated, and as the data was collected manually, missing values were addressed throughout the collection process.

Furthermore, this approach allows for a comparison between the results found by researchers and third parties, identifying any biases or variations in the data. This leads to a greater understanding of LTMPs and an alternate method of collection. The combination of increased research through innovative means of gathering data should be of major importance to policy and decision makers. With more information gained from researchers unrestrained by data bias, third parties can utilise results to measure the effectiveness of current policies, practices and procedures, and the efficacy of systems in recording missing persons data. This has the potential to lead to better resource allocation, reducing the number of LTMPs and implementing measures to identify those at risk of becoming a LTMP [53].

Overall, this study contributes to the knowledge of LTMPs worldwide, and addresses the question of how utilising publicly available data can address issues of data integrity when

evaluated against data provided by third parties and the issues raised in existing research while also identifying limitations.

1.6 Limitations

The limitations identified in this study pertain to the challenges encountered in obtaining access to third-party policies specifically designed for law enforcement to address missing persons, including associated research. The lack of information available made it difficult to provide any direct references to existing Australian methods of handling missing or LTMP cases. This hindered the ability to determine if law enforcement has been provided with appropriate, evidence-based research to guide directives and ensure optimal outcomes and resource allocation.

The second limitation was the time-consuming nature of collecting and evaluating data to ensure the accuracy of the LTMP dataset. To minimise errors, Excel spreadsheets were utilised to store the data, incorporating formulas that highlighted any discrepancies, such as duplications, variations in calculated and reported ages, and employed list boxes rather than manual entry.

Additionally, there were concerns regarding the ethnicity data, as it relied on Australian Census data from 2016, which is based on self-reported information, which may fail to accurately reflect the true ethnicity counts. From the researcher's perspective, LTMPs were evaluated based on available data, leading to "best guess" allocations.

1.7 Structure

The structure of this thesis is as follows: Chapter 2 presents a review of literature pertaining to the topic of LTMPs, including existing research on this subject. Figure 1–1 below provides a thesis framework by demonstrating the process used to gather (Chapter 3), clean (Chapter 4) and analysis the LTMP data (Chapter 5). Chapter 3 outlines the methodology employed in this study, including the methods used for data collection, as well as the who, what, when, where, why, and how of the study. Chapter 4 provides an overview of the dataset that was created, including details on the major characteristics, jurisdiction, calculated age, gender, and ethnicity that were analysed in this study. Additionally, this chapter includes a brief description of a limited number of other identified characteristics, referred to as minor characteristics, that are worth considering in future research. The dataset includes information on the date, month, and year of disappearance, as well as the month and year of birth, and coronial investigations counts.

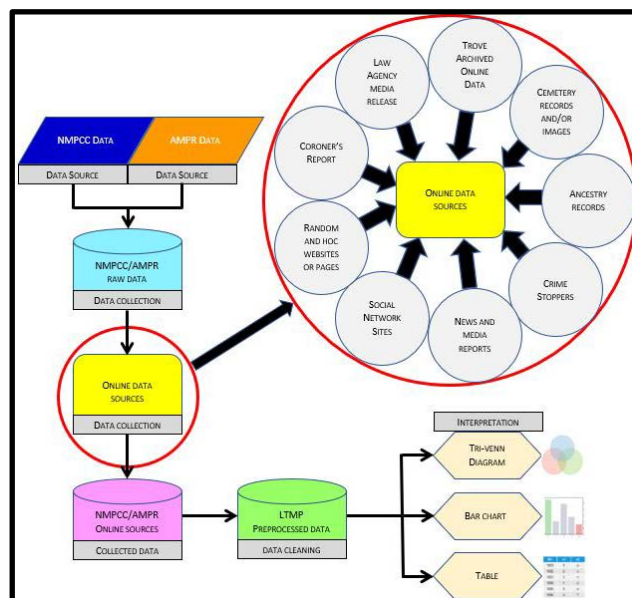


Figure 1–1 Long-term missing person dataset creation process: collection, cleaning, and analysing.

Chapter 5 presents the results of the analysis of the four major characteristics, jurisdiction, calculated age, gender, and ethnicity. Chapter 6 provide an overview of this study and also discusses the key findings that emerged from the analysis, while Chapter 7 concludes the study and summarises the main findings, and the significance of using online sources for future research.

1.8 Summary

The goal of this study is to expand our understanding of LTMPs in Australia. By using descriptive analysis of publicly available data, this study demonstrates the value of this type of data source as opposed to relying on de-identified data from third parties. The study employs a cross-sectional approach, focusing on LTMPs who were unlocated as of May 19, 2020, and using online publicly available data to create a dataset. The LTMPs dataset was then analysed to identify patterns of significance, which were compared to findings from three international studies on LTMPs.

As the study utilises an unconventional method of data collection, it raises a number of important questions and addresses them in order to ensure the validity of the results, limitations, and opportunities for replication by future researchers. The need for greater understanding of missing and LTMPs is well established, and this research aims to contribute to this field of study by identifying those at risk and understanding the possible factors that contribute to their disappearance. The ultimate goal is to minimise the risk of LTMPs, which can only be achieved through increased research in this understudied area.

CHAPTER 2

LITERATURE REVIEW

2.1 Background

On average, across all Australian states and territories, as at 2020, approximately 38,000 people were reported missing each year [39], [57]. This number was updated to over 51,000 in 2021 [28] unfortunately no information was available to explain the increased number of reported missing persons. Of those missing around 2% become a LTMP [38]. The broad definition of a LTMP is someone who has been reported to law enforcement and has been missing for longer than three months [58].

Research into missing persons is a relatively new area of study, therefore academic information regarding missing persons and LTMPs is limited [32], [39]–[40], [50], [59]. The first notable broad missing persons study was carried out in 1988 by Australian researchers Swanton et al. (1988) [36]. Swanton et al. (1988) referred to the “*untraced*” as opposed to LTMPs. The researchers suggested this group needed to be thoroughly researched, specifically “*characteristics of persons, circumstances and possible linkages*” [36, p. 277]. At the time of the study, the researchers identified issues around the systems used to record information and the inability to retrieve accurate data from them [36]. The study identified many of the same key points which are still present in more recent studies, including those conducted by international researchers.

Bricknell (2017) [38], an Australian researcher, suggested that current systems had limitations, for example, data access, data robustness and data completeness when utilised for research purposes. Australian studies over the past twenty years have consistently found that of all those that do go missing, ~98% are found within a short period of time, generally anywhere from 48 hours to a month [39]. Additionally, research has shown that females, between 12 and up to the age of 17 years old, are more likely to go missing compared to any other group. These findings appear to mirror that of international studies [6], [9], [37], [44], [60]. Since the Swanton et al. (1988) study [36], less than thirty academic publications and government reports have been released to the public in relation to Australian missing persons. Of those, none specifically relate to the LTMPs although LTMPs are mentioned.

Studies on missing persons rarely separate the long-term missing from the general missing persons population. Indeed, the term “*missing person*” is a misnomer as it fails to put

into context the circumstances around how and/or why individuals go missing [40]. A major contributing factor to this lack of separation, is the difficulty in standardising the terms “*missing person*” and “*long-term*” missing person. Due to the breadth of the term missing person, researchers have suggested that such a description is too generic to be useful in understanding the phenomenon [40]. Researchers have identified the need for a universally clearer and definitive definition [40], [61]. A term coming into favour is “*missingness*”, which describes the act of “*going missing*” [61]. Having more uniformly applied terms would assist with understanding who goes missing and why, providing better parameters for law enforcement, and allow for more consistent data to be collected [40]. Shalev-Greene, Hayler, and Pritchard [41] pointed out the difficulties associated with developing such a missing person definition. If a definition is too specific, certain cases may be omitted by default [41] for example individuals thought to have disappeared because they ran away may be beyond the scope of “a missing person”. By attributing such terms to a report when the actual cause of the disappearance is unknown, may result in individuals being excluded as a potential missing person. Alternatively, if definitions are too broad, law enforcement resources may be expended on locating individuals that warrant no such action [41]. Currently, the interpretation of who is a missing person is country specific and potentially jurisdictionally determined [41], [62]. Some countries have a legally binding definition of a missing person (e.g., Cambodia, Estonia, Hungary, Guatemala, Russia, South Korea, Ireland and the United States of America (USA)) [41], [62]. Even without a legal determination, most countries have a written document outlining who is a missing person [41]. These outlines can generally be found in either police regulations (i.e. Belgium, Bulgaria, Costa Rica, Malaysia, Latvia, Philippines, Poland, Singapore and the UK) [41], or within policy [41] (i.e. Australia) [63]. Other countries may have neither a legal or policy definition of a missing person, for example Cyprus, Denmark, France, Greece, and Spain [41]. Each of these countries independently applies their own understanding of what constitutes a missing person [41]. In countries where the legislation or policy is provincially applied, there is often scope for further variation in interpretation [41]. Law enforcement within those provinces may have the option to expand or modify the missing person definition by applying their own procedures and guidelines [41].

Another level of complexity is added when attempting to define a LTMP. The clear difference between both groups is time. At a predetermined time, a person shifts from missing to LTMP. Only a small number of countries have any form of definition which specifies time. Two countries were found to have such a definition, being Australia [58] and Scotland [64]. Both countries have a determined length of time for a LTMP in policy only [63], [64]. A LTMP in Australia is anyone missing longer than three months [58]. Scotland on the other hand considers anyone missing for 28 days or more is a long-term missing [64]. It is unknown how

Australia determined greater than three months or how Scotland established the 28-day time period. Other countries appear to apply a one year or more time absence before classifying a person as a LTMP. Generally, this one year or greater period seems more of an accepted practice as opposed to a legally binding or policy driven decision. In personal correspondence from Shalev-Greene [65], the United Kingdom generally takes the one year or more position. In the USA, National Missing and Unidentified Persons System (NamUs) [66] advised that although it was up to the jurisdiction, the standard length of time passing before a person was considered long-term missing was one year or more. As the one year or more mark seems to be the common understanding, it would be reasonable to assume that this is a historical standard that remains in place today. Concerns raised by researchers around terminology consistency can also be applied when establishing the length of time absent before a missing person is deemed a LTMP.

Missing persons is considered a relatively new area of research and as previously indicated, the research around missing persons in Australia [35], [38]–[39], [58] is limited and for the LTM, is equivalent to non-existent. Organisations such as the Australia New Zealand Policing Advisory Agency (ANZPAA) carry out research however they have failed to be made these studies publicly accessible, therefore it is unknown if any of these studies address LTMPs. Available research generally focuses on univariate descriptive analysis of data; age range, gender, and ethnicity [67]. This information alone fails to reveal significant information that assists with understanding how or why people go missing. What this information does provide is a framework which researchers can use to develop specific areas of study around children, elderly [6], [35]–[39], [42]–[43], [51], [59], [61]–[60], [68]–[69], and those with mental health issues [32], [36]–[37], [39]–[40], [51], [55], [57], [59]–[61], [69]–[71]. Researchers have then applied a quantitative or qualitative approach to understand why those groups tended to go missing. Taking such an approach enabled researchers to see patterns of causation. By comparing patterns with those found in other missing person groups, researchers then started to develop causal themes of why people go missing [54]. Using this process, researchers have been able to identify common themes appearing across all missing persons indicating the reasons they go missing. Henderson, Henderson, and Keirnan [51] discovered that individuals may unknowingly become missing due to miscommunication, an accident, or a third party causing their disappearance. In those cases, Henderson, Henderson, and Keirnan [51] suggested they had gone missing “unintentionally”. Biehal, Mitchell, and Wade [37] expanded upon this by acknowledging that some people actively chose to leave their current situation without advising anyone. These individuals have “intentionally” left due to some personal reason ranging from financial worries to domestic violence. Adding intentional to the list of causal themes further contributed to the knowledge of why people go missing. Bonny,

Almond, and Woolnough [50] reviewed the literature and found that a third theme could be included which covered those with mental health issues for example, depression, schizophrenia, drug related. The researchers identified that *but for* the mental health issue/s, these individuals may never have gone missing [50].

Further issues highlighted by researchers concerns the quantity and quality of missing persons data. Australian researchers have identified challenges in accessing this data and concerns over its accuracy. These challenges stem from inconsistent and arbitrary data entry practices, as well as the missing or incorrect recording of key characteristics of missing persons. Additionally, different law enforcement jurisdictions within Australia utilise incompatible DMSs, which further exacerbates the issue of data sharing and entry consistency [6], [38]–[39]. For instance, QLD uses QPRIME, a different DMS to that of VIC which utilises LEAP [6], [8], [12], [15], [23]. James, Anderson, and Putt (2008) [6] noted that out of the eight law enforcement jurisdictions in Australia, their data was derived from only seven DMSs. It is worth noting that the use of separate DMSs still persists in Australia as of 2020, with Tasmania (TAS) being the exception (the below Table 2–1 shows available 2008 data while Table 2–2 provides the currently DMS in use as at 2020). Similar problems have been observed in international studies, which have highlighted concerns over data accuracy and incompleteness when analysing missing and LTMPs information. Incomplete or inaccurate data impacts the results by bringing into question the reliability of findings due to the lack of robustness and completeness of the data. These international studies however have mainly focused on the quality of data as opposed to access difficulties.

Table 2–1 Adapted from James, Anderson, and Putt (2008) [6, p. 152], Identified Australian law enforcement DMS and available missing person data.

| Jurisdiction | ACT | NSW | NT | QLD* | SA | TAS | VIC | WA |
|---|---------------------|---------------|---------------|---------------|-------------------|---------------|---------------|---------------|
| DMS | PROMIS/Excel | COPS | PROMIS | * | PIMS/Excel | Access | LEAP | Access |
| Characteristic | Yes/No | Yes/No | Yes/No | Yes/No | Yes/No | Yes/No | Yes/No | Yes/No |
| Characteristics included from LTMP study for analysis | | | | | | | | |
| Age | Yes | Yes | Yes | * | Yes | Yes | Yes | Yes |
| Gender | Yes | Yes | Yes | * | Yes | Yes | Yes | Yes |
| Ethnicity | No | Yes | Yes | * | Yes | Yes | Yes | Yes |
| Indigenous | No | Yes | Yes | * | Yes | No | Yes | No |
| Characteristics excluded from LTMP study for analysis | | | | | | | | |
| Drug/alcohol | No | Yes | Yes | * | Yes | No | Yes | Yes |
| Mental issues | Yes | Yes | Yes | * | Yes | Yes | Yes | Yes |
| Missing from | Yes | Yes | Yes | * | Yes | No | Yes | Yes |
| Nationality | No | Yes | Yes | * | Yes | Yes | No | No |
| Prior history | Yes | Yes | Yes | * | No | Yes | No | Yes |
| Probable cause | Yes | Yes | No | * | Yes | Yes | Yes | ** |
| Time Missing | Yes | Yes | Yes | * | Yes | Yes | Yes | Yes |

QLD – Information was unavailable, ** WA – Information was unavailable

Table 2–2 Law enforcement data management systems found in James, Anderson, and Putt, 2008 study [6] and compared to systems used in 2020.

| Law enforcement jurisdiction | DMS [6, p.152] | Law enforcement DMS as at 19 May 2020 |
|------------------------------|----------------|---|
| Australian Capital Territory | PROMIS/Excel | PROMIS currently in use [8], [12], [22]. |
| New South Wales | COPS | COPS currently in use. NSW received funding to update current DMS, however terminated agreement in 2022 [7]–[8], [12], [72]. |
| Northern Territory | PROMIS | PROMIS currently in use. A new DMS, SerPro, is in the final stages of implementation [12], [25], [26]. |
| Queensland | N/A | QPRIME currently in use. No access provided in 2008. QPRIME was operational in 2007 [7]–[8], [12]. |
| South Australia | PIMS/Excel | PIMS currently in use [8], [12]. |
| Tasmania | Access | ORS was the DMS use [12], however only Access was listed in the 2008 [6] study. From 2017/2018 it appears that ORS was replaced with NicheRMS (aka “Atlas”) [8], [73]–[74]. |
| Victoria | LEAP | LEAP currently in use [8], [12], [15]. |
| Western Australia | Access | IMS currently in use. IMS also appears to have been in use in 2008 [8], [11]–[14]. |

Researching LTMPs cases and identifying patterns of causation can be of benefit to both Australian and international law enforcement by providing greater understanding of those affected and those at risk [36]. Using knowledge gained from revealed patterns of significance will enable better policy, practice and procedure development effecting better resource allocation, improved outcomes for the individual who is missing, their loved ones and the affected community [32], [35], [39], [44], [51], [59]–[60], [75]. For law enforcement agencies, a better understanding of both groups, enables, for example, ANZPAA to develop policies and procedures that Australian law enforcement agencies refer to and utilise when faced with missing person reports. Studies also provide a way to monitor and evaluate the effectiveness of those policies and procedures, thereby affording the opportunity for change resulting in improved outcomes [19], [32], [35], [39], [44], [50]–[51], [59], [60]. This ideology can be seen as a recurrent theme within studies on missing persons. Researchers also acknowledge access to quality data on missing persons impedes research opportunities which contributes to the shortage of available literature [19], [32], [35], [39], [44], [50]–[51], [59], [60]. These issues, although important, are beyond the scope of this study, however it is necessary to note the beneficial implications discovered and reported on by these previous studies. The focus of this study is determining what data on LTMPs is publicly available, while investigating if data integrity issues can be minimised using online sources from which data can be gathered. Finally establishing if this data be analysed to identify patterns of significance, which in turn could assist in developing more detailed profiles of LTMPs.

2.2 Missing Person Profile

Any person or group of people can go missing regardless of their location, age, ethnicity, gender, or socioeconomic position [41]. This broad demographic causes some difficulty when attempting to profile missing persons based on characteristics. Shalev-Greene, Schaefer, and Schaefer [67] identified that researchers have often focused on statistical analysis of data, noting that this does provide valuable insight into groups requiring further study. Although, this provides scope for research, it fails to provide any significant information as to why people go missing. This understanding of characteristics enables researchers to build basic profiles of those who go missing, and thereby identifying which groups are statistically most at risk [54]. As the research for this study is solely focused on the long-term missing within Australia, the only characteristics that will be analysed for comparison will be those identified from previous Australian specific missing person studies. People missing as a result of human rights violations such as sex/human trafficking and state sanctioned abductions [51], are beyond the scope of this research.

The most recent Australian study on missing persons was carried out by Bricknell and Renshaw [39] on individuals who were reported as missing from 2008 to 2015. This 2017 study was a less comprehensive version of a previous study carried out in 2008 by James, Anderson, and Putt [6]. Both studies looked at three main categories: age, gender and, Indigenous status. As the data was collected from each state and territory within Australia, a breakdown of the categories, based on jurisdiction, were also included. Other areas that were also investigated in both studies included multiple events of the same person going missing and individuals with mental health issues [6], [39]. Both studies noted that the quality of the data used as the basis of the research was of concern [6], [39]. Each state and territory utilised discrete databases to record reported missing persons data [6], [39]. Currently there is no agreed national standard in Australia for the recording of missing persons data. The absence of a data collection standard has resulted in each jurisdiction creating or purchasing their own ad hoc database which may limit the options available to law enforcement when collecting information of those who are missing. The databases are specific to the needs of the individual jurisdiction causing inconsistencies in what data is collected and how it is recorded. Due to the varying quality of data provided by these different systems, the resulting information needed be considered more aligned with highly informed approximations as opposed to definitive and consistent facts. A case in point is the inclusion of absconders within missing persons data. Bricknell and Renshaw [39] defined “absconders” as those that go missing from care i.e., out-of-home care, supported care facility, mental health facility including hospitals, however the term absconder is open to interpretation [39]. Of all the states and territories, Queensland (QLD) was the only state that

separated absconders and missing persons [39]. This meant that the final missing person numbers from all but QLD were artificially inflated making it difficult for the researchers to calculate the correct number of missing persons in each jurisdiction. Finally, the one important difference between the two studies was that James, Anderson, and Putt [6] accessed data belonging to law enforcement and two non-government search agencies, whereas Bricknell and Renshaw [39] analysed law enforcement data only. This variance in the source of data appeared to have no significant impact on the overall results by Bricknell and Renshaw's (2017) [39] when compared with James, Anderson, and Putt [6].

Between 1988 and Bricknell's [38] study of 2017, less than thirty papers in relation to missing persons in Australia were published. None of those studies investigated long-term missing, meaning very little is known about this group. Bricknell's [38] study focused heavily on statistical analysis of the demographics of missing persons in general. The findings included people with mental health issues were considered high risk, 98% of people reported missing were found, and children were the most likely to go missing [38]. Although no specific results related to the long-term missing, two key findings considered in unison, may indicate characteristics of LTMPs. The study found that those who failed to be found are generally middle aged to older adults [38]. This indicates that middle aged to older adult males are at higher risk of becoming a LTMP. This possible conclusion on LTMPs was excluded from the final discussion, implying it was incidental to Bricknell's [38] study (see Table 2–3 below for key findings) [39].

Table 2–3 Key findings relating to characteristics of missing persons and LTMPs from Bricknell and Renshaw (2008–2015) study [39].

| Age | Gender | Location | Tine/Other |
|---|---|--|---|
| 50% of the missing persons population were children aged 13–17 | The distribution of males and females appear even, with some slight variation based on jurisdiction | The Northern Territory (NT) received the highest number of Indigenous missing person reports | On average, 98% of missing persons are located |
| The number of reports in relation to children under 13 and adults are approximately equal | Males were more likely to go missing if under 12 or over 25 | New South Wales (NSW) has the highest number of missing persons | Highest number of missing people are found alive and within 48 hours |
| People who failed to be found were more likely to be middle aged to older adults | For persons between 18–24 who are reported missing, the distribution of males and females appear to be evenly split | The NT had the highest number of missing person reports for children between the ages 0 – 12 | Up to 17% of missing persons, had some sort of mental health issue at the time they were reported missing |
| | ~75% of those found deceased, were male | | |

Middle age and older adults have no clear definition of age range in the literature addressing or discussing missing persons or LTMPs. For the purposes of this study, middle aged and older adults have been established by applying either a similar term or exact term, as explained in the ABS standards of age ranges [76]. As explained by ABS, the terms used to define age groups is based on The United Nations guidelines standards for age classification

[76]. Middle age has been paralleled with the ABS term middle adulthood with an age range of 25 to 44 [76]. Older adults have been associated with the ABS corresponding term older adulthood to average retirement with an age range of 45 to 64 [76]. Other age ranges have also been described by ABS, under >1 (infancy), 1 to 14 (young), 15 to 24 (young adulthood) and ≥ 65 (retirement) [76].

Many researchers in Australia and internationally acknowledge that more research needs to be done on missing persons including LTMPs [6], [35], [37], [50]–[51]. As indicated by researchers, having statistical data alone provides little context around why people go missing. Researchers have however, accepted that this information is necessary to provide the basic framework on which areas of research can be built [35]. Researchers have recommended that future areas of study need to go beyond just statistical analysis of missing persons basic demographic information. Suggested areas of research requiring further investigation included missing adults and the LTMPs. Unfortunately, many of the areas for future research as suggested by researchers are failing to be pursued. Often studies done, mainly by international researchers, have focused on specific groups identified as at risk, i.e., children and those with mental health issues [6], [35], [37], [50]–[51]. These groups had been identified by finding commonalities within the characteristics of missing persons in general. In relation to the long-term missing, as only three studies have been carried out on this group, it would be remiss to assume that the current statistical results of all missing persons can be confidentially applied to LTMP.

2.3 Long-term missing persons

The three studies that investigated LTMPs were carried out by international researchers, Newiss (2005) from the UK [31], and two from Canada, Cohen, McCormick, and Plecas (2008) [32] and Sekela, Plecas, and Cohen (2010) [9]. The studies revealed similar results in relation to age and gender, that being adult males were statistically more prevalent among the long-term missing [9], [31]. Additionally, each study also investigated ethnicity. Newiss found that those from non-white European backgrounds appeared to be overrepresented among the LTMP cases [31]. Both studies from Canada found that Aboriginal LTMPs were also overrepresented firstly for all genders of that specific minority group and again for those who were female [9], [32]. For the British Columbia study [32], three jurisdictions were included each with varying population counts of Aboriginal peoples. Those areas with a higher Aboriginal population failed to account or change the overall disproportionate number of LTMPs from that minority group, regardless of gender.

Part of this study focuses on the limited information around the characteristics of LTMPs. By applying the same baseline demographics of age, gender, and ethnicity to Australian LTMPs, a comparison can be carried out to determine if the results are similar or dissimilar to the findings seen in the 2005, 2008 and 2010 international studies. Having this updated information available may support the development of future policies and procedures for those involved with missing and LTMP cases, while also value adding, in general, to our knowledge on this topic. Access to data on LTMPs would allow for greater understanding of the causes of disappearance which are currently applied to missing persons in general and to determine if the same underlying causes can be apportioned to both missing and long-term missing persons.

2.4 Cause of disappearance:

Unintentional/Escape/Dysfunctional

Early studies by Australian researchers investigated the characteristics of persons that were missing, and the underlying causes [35]–[36]. These studies provided statistical information on the numbers of people missing including demographic breakdowns, case studies and carried out qualitative and quantitative analysis from those connected or involved with missing persons [35]–[36]. Researchers created surveys, conducted interviews with families of missing persons, engaged with government/private organisations and reviewed law enforcement missing person reports [35]–[36]. The research by Swanton et al [36] identified that being able to categorise motives was an integral part of understanding why a person could or did go missing, i.e., cause and effect. In Swanton et al [36] study they applied the generally accepted categories of “*voluntarily*” or “*involuntarily*” [36]. These unofficial categories were used by law enforcement, support agencies and social service providers to understand or predetermine why a person was or would go missing. Having these categories allowed for a broad conceptualisation of why a person maybe missing, however provided minimal understanding to support the “*voluntarily*” or “*involuntarily*” claim [36]. In many cases, how law enforcement determined if a person was “*voluntarily*” or “*involuntarily*” missing was through approaching those who could provide insight into a person's normal behaviour e.g., doctors, bankers, schoolteachers, friends, and employers [36]. The final determination though was at the behest of the law enforcement officers involved. Voluntarily absences were often associated with that individual's personal circumstances such as a family situation, work, or financial difficulties; in most cases this group chose to return home [36]. Involuntarily absences related to parental child abductions, kidnappings, misleading enticements to lure the person and altered mental state due to drugs or mental health issue [36].

In 2003 these themes were again reviewed and revised by Biehal, Mitchell, and Wade [37]. For this study, the researchers looked at available research papers and analysed data made available to them by the National Missing Persons Helpline charity, UK [37]. The researchers found that due to the diverse reasons people go missing or are perceived as missing, to label them “*intentionally*” or “*unintentionally*” missing was too simplistic [37]. The either/or choice failed to measure the level of choice or risk associated with a particular individual’s cause of absence [37]. On reviewing available literature and data gathered for their study, the researchers theorised that the intentional/unintentional cause of going missing may be better explained using a continuum line as opposed to an either/or option [37]. Using a continuum line, referred to as the “*The Missing Continuum*” allowed for individuals to shift from one point to another without changing their status of missing. The suggested use of “*The Missing Continuum*” line provides a more informative way to conceptualise why a person was/is missing, i.e., “intentional” to “unintentional”. The researchers made no changes to the causes associated with “intentionally” or “unintentionally”, meaning that the existing understanding of the themes remained status quo. Biehal, Mitchell, and Wade [37] also concluded that by applying “the missing continuum”, a person can appear and shift on the continuum line (see Figure 2–1 below for adapted Missing Continuum diagram) even if they go unreported or they themselves fail to be aware they are missing. Biehal, Mitchell, and Wade [37] understood that a creating a continuum line allowed the cause of a person going missing to dynamic as opposed to being static with only one cause.

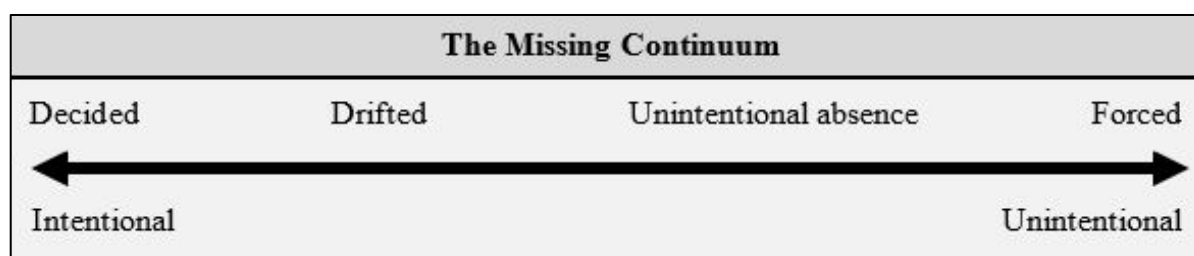


Figure 2–1 The Missing Continuum, adapted from Biehal, Mitchell, and Wade (2003) [37].

Another UK study carried out by Bonny, Almond, and Woolnough [50] looked at adult missing persons. The focus of this research was to determine if adults had any behaviours that could be used to establish behavioural themes. If behavioural themes existed, then a causal link could be established that may predetermine their propensity to go missing [50]. Looking at current literature, the research hypothesised that three behavioural themes existed: “escape”, “unintentional” and “dysfunctional” [50]. By amending “intentional” to “escape” the researchers were able to encapsulate the inherent meaning attributed to a person who intentionally goes missing. As identified in the literature, the root cause of people who intentionally go missing are fundamentally based upon wanting to escape their current

circumstances; domestic violence, financial pressures, fear of retribution or negative consequences due to past/current actions/activities [50]. The researchers made no changes to the accepted causes that are applied to individuals who are considered “unintentionally” missing. A major change to the existing themes relating to the cause of why people go missing was the addition of the subtheme “*dysfunctional*” [50], [54]. The subcategory “dysfunctional” was suggested as it can capture those missing due to medical/mental health issues or addictions [50]. The subtheme could also explain why an individual “escapes” or goes “unintentionally” missing [50], [54]. “Dysfunctional” more commonly refers to adults with neurocognitive disorders, substance-related and addictive disorders [56], however children and young and elderly adults can also go missing under these themes. If an individual who is known to or suspected of having cognitive impairment and goes missing, this diminished ability to make good judgements/decisions is often attributed to the cause of their disappearance. Behaviours that are attributed to the dysfunctional theme include previous suicide attempts, hospital admittance and/or seeking professional help [50]. Mental health issues such as bipolar disorder, depression, psychosis/schizophrenia, and dementia [60] are considered to be part of the dysfunctional theme [50]. Having any one of these mental health issues may cause an individual to go missing, suggesting actions of the “dysfunctional” missing [50]. Individuals who are considered missing to “escape” or due to “dysfunctional” causes were potentially at higher risk of suffering harm than those who go “unintentionally” missing [50].

The most recent study to incorporate the use of themes and determine if they are relevant to understanding why people go missing was carried out in 2020 by García-Barceló et al [55]. The researchers looked at Spanish missing person cases and performed a theme-based analysis [55]. The researchers reviewed previous research on themes including “the missing continuum” concept [37] and applied those existing ideas to the themes they identified [55]. The researchers discovered that the current causal themes could be further refined, enabling a more succinct understanding of why persons go missing, [55]. The researchers found the current themes of “intentional”, “escape” and “dysfunctional” could be expanded into “intentional-escape”, “intentional-dysfunctional”, “unintentional-accident/drift” and “unintentional-criminal” [55]. The two main points of difference relate to the specificity in the theme names: firstly, the amended themes provide a clearer understanding of the underlying cause(s) of why a person may become missing [55]. The second change relates to “intentional-dysfunctional”. The study intimates that those suffering a mental health issue or addiction left based on free-will whereas previous studies apply “dysfunctional” to both “intentional” and “unintentional”. This could possibly be considered a contentious issue under this new model. Those working with people suffering mental health issues i.e., dementia, drug addiction may

argue that with brain deterioration comes diminished capacity to make informed rational choices [71].

The themes identified by Bonny, Almond, and Woolnough [50] may be broad, however unlike García-Barceló et al [55], “dysfunctional” was considered as either “unintentional” or “escape” thereby acknowledging that reduced faculties impacted on a person's decision-making process. Researchers carrying out investigations into the use of themes, all agree that more research will assist in determining who is high risk, where law enforcement resources should be allocated and what government strategies are needed to reduce instances of persons going missing [36].

2.4.1 Cause of disappearance: Unintentional

An unintentional missing person maybe a result of miscommunication, meaning it is unknown to them that their lack of contact has others concerned about their welfare [50]. These individuals would continue to live normally, carrying out “business as usual” for example accessing bank accounts, and using mobile phones [50]. There is an expectation, that once they knew they had been listed as missing they take action to remedy the misunderstanding [50]. Other factors may also contribute to an individual going missing unintentionally such as an accident, or other unfortunate event that inhibits them from contacting family, friends, or other agencies [50]. Research by Bonny, Almond, and Woolnough [50] supported Henderson, Henderson, and Kiernan [51] study which identified that people “unintentionally” go missing [51].

2.4.2 Cause of disappearance: Escape

When individuals go missing “intentionally”, there is often an underlying cause, such as “escape” [50]. By leaving or “escaping”, they choose to remove themselves from a situation [50]–[51]. Factors of “escape” include family relationship problems, work, and financial difficulties [50]–[51]. Adults are more likely to “escape” an environment considered to be traumatic [50]. Some individuals choose to go missing to avoid being a victim of domestic/sexual abuse [42]. Although children are known to “escape” from similar situations, adults are more likely to have the resources that allow them to “escape” [50].

2.4.3 Cause of disappearance: Dysfunctional

The subcategory “dysfunctional” missing encompasses those that go missing due to neurocognitive disorders problems or addictions [50]. “Dysfunctional” can result in an individual going missing “unintentionally” or “intentionally” [50]. “Dysfunctional” missing

person cases often focus on adults, however children and young adults who vanish could also fall under this theme. For “dysfunctional” causes to be excluded, investigators need to understand a person’s state of mind or those around them, starting from when they were last seen to possibly months or even years prior to their disappearance [50]. Without access to a person’s history for research purposes, it is potentially risky to both the person who vanished and the investigative process to attribute “dysfunctional” more strongly to one age group over another. Behaviours that are attributed to the “dysfunctional” missing include previous suicide attempts, hospital admittance and/or seeking professional help [50]. Mental health issues such as bipolar disorder, depression, psychosis/schizophrenia, and dementia [60] are considered to be part of the “dysfunctional” theme [50]. Having neurocognitive disorders, substance-related and addictive disorders [56] may cause an individual to wander or act in a way that is harmful to themselves or others [50]. Individual or multiple actions and/or thoughts caused by neurocognitive disorders, substance-related and addictive disorders are categorised as “dysfunctional”. This “dysfunctional” state increases an individual’s risk of disappearing, be it “unintentionally” or “intentionally” [50] and regardless of age.

2.5 Significance

The study of missing persons remains an under researched topic, which leaves gaps in our knowledge of those at risk [59]. Interest in adult missing persons has increased, however major gaps in understanding this phenomenon still exist [38], [40]. The information currently collected needs further investigation to develop better profiles of those that go missing [32]. The study carried out on missing persons by Bonny, Almond, and Woolnough [50] identified three typologies, “unintentional”, “intentional”, and “dysfunctional” that could be attributed to missing persons.

Bricknell [38] also identified that there is limited research on missing persons, specifically in Australia. The majority of accessible information relates to those with mental health issues, and children [38]. When researching persons who have remained missing and are yet to be located, only a limited number of Australian and international studies have been conducted [77]. The statistical information about missing persons, if released, is done so on an ad hoc basis: even then, only a limited amount of research is carried out on that data [77]. Currently, most of the missing persons research has focused on quantitative analysis of available data. Dartnall and Goodman-Delahunty [77] highlights the need for more research on missing persons as it is of considerable interest to the public. Studies have found that the emotional, financial, and health costs associated with missing persons impact the community

as a whole [77]. Based on the costs associated with investigations and the emotional effects, there is a need for greater understanding of missing persons behaviours [50].

By researching LTMPs, the current knowledge base will be expanded, affording law enforcement the opportunity to develop more tools to assist with future investigative processes. With greater knowledge, improved training and more resources, better decisions can be made by decision makers and those tasked with locating missing persons [69]. Stevenson and Thomas [69] paper also concludes that having a multi-agency framework approach would improve the outcomes of those that go missing. Improved outcomes include minimising recidivism, reduce victimisation rates, and develop funding structures that allocate money to services that can support those with mental health issues [69].

2.6 Conclusion

This literature review proposes that the topic of missing persons, including LTMPs, is under researched in Australia and internationally. Existing studies note particular characteristics are commonly seen among missing persons. Researchers have suggested that a person's risk of going missing increases based on factors such as age, gender, those with neurocognitive disorders, and individuals who are marginalised. There is minimal evidence to support that the same characteristics can be applied to LTMPs. Research has actually shown that children are more likely to go missing, however adults tend to become a LTMP. Identified themes of "unintentional", "escape" and "dysfunctional" that explain why certain groups with specific characteristics are more likely to go missing appear to have also been applied to LTMPs. Again, there is limited information to support this assumption. By using available online data researchers are afforded the opportunity to gather a variety of data, cross-check that data against other online sources and to test the validity of assumptions such as time missing is the only difference between missing and LTMPs.

The purpose of this study was to take a quantitative and qualitative approach to understanding LTMPs who originally vanished and were in Australia when they were first reported missing. Initially, a existing LTMP dataset was attempted to be sourced however no such dataset was publicly available. It is undetermined if a complete Australia wide LTMP dataset exists in a private or government (federal or state) owned repository. As no publicly available dataset could be located on LTMPs, methods to access LTMPs were limited to two options.

The first option was to contact each Australian law enforcement jurisdiction and request authorisation to obtain a copy of LTMPs personal information relevant to each state and territory. As no cross jurisdictional DMS exists the application process would need to be

repeated eight times. Each state and territory would have to be contacted separately, and requests lodged in accordance with each law enforcement jurisdictions specific policies and procedures. One of the standardised processes included gaining ethics approval, from both James Cook University (JCU) and each law enforcement agency. Another requirement from the law enforcement jurisdictions was to demonstrate how this research would benefit that specific jurisdiction. Meeting such requirements had been anticipated, however what was unexpected, and also concerning, was release of the data may be conditional. During initial discussions with individual judications about data access, it was indicated that final approval may depend on that jurisdiction having the authority to veto results being published. It was then intimated that if the results appear unfavourable or negative to that jurisdiction, the findings may remain unpublished. After considering the approval process, and the potential provisos placed upon findings prior to publication, it was determined that reviewing online publicly available data on LTMPs was the optimal solution. This decision then allowed for the development of the three research questions, what data was publicly available on LTMPs, can this data be analysed to identify significant patterns, and can this approach address issues of data integrity compared to having data provided by third parties?

Chapter 3 to Chapter 5

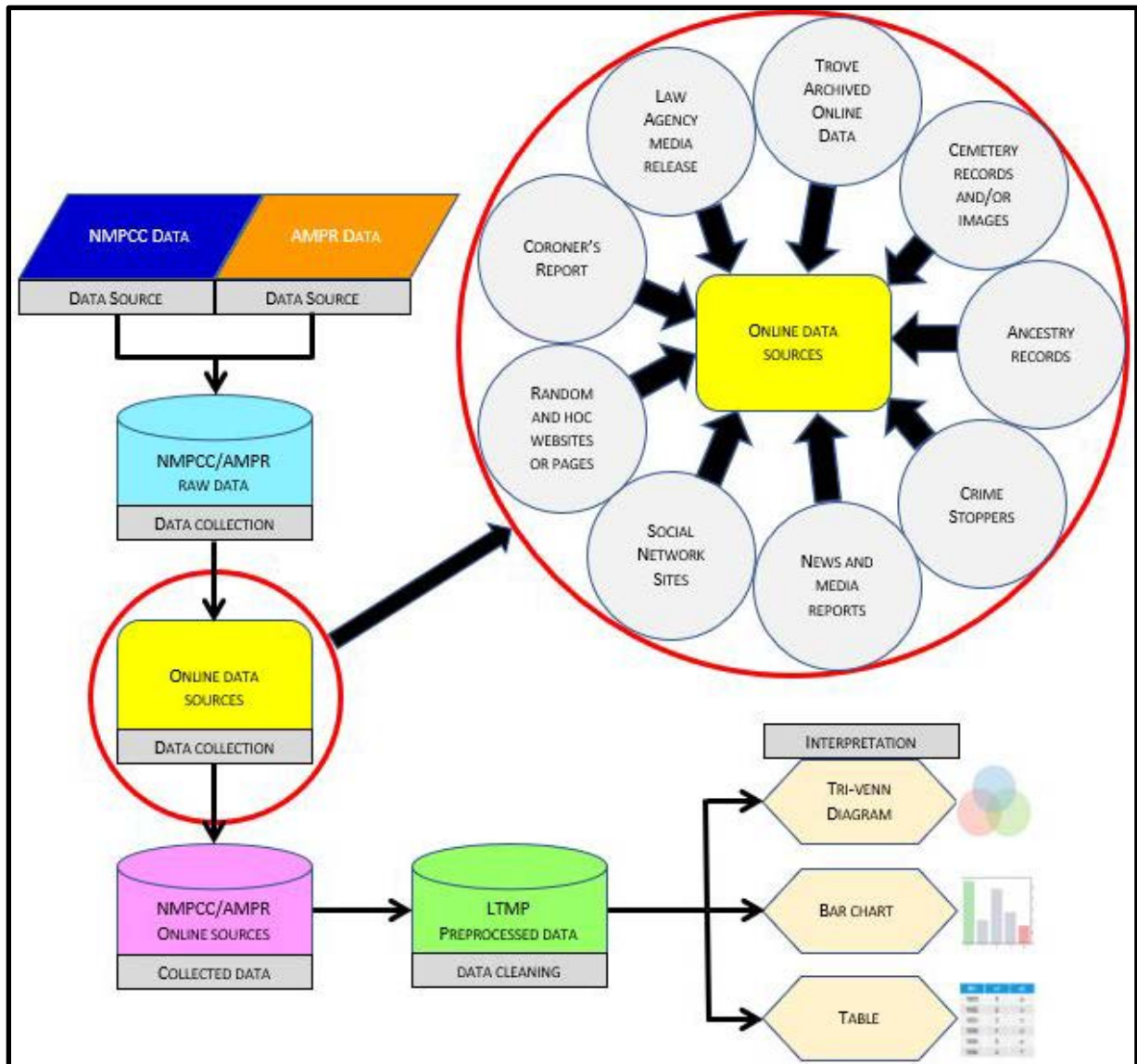


Figure 3-1 Overview of research process in Chapter 3 to Chapter explaining data collection process, data cleaning process and results.

CHAPTER 3

METHODOLOGY

3.1 Introduction

Historically, research on missing persons has primarily focused on the general population, with little attention given to LTMPs. This gap in the literature is particularly pronounced in the Australian context, where no studies have yet specifically investigated LTMPs. The earliest Australian study on missing persons by Swanton et al. (1988) [36] highlighted the need for more research on this topic.

International studies have also mainly overlooked LTMPs. There have, however, been a few exceptions. Newiss (2005) [31] investigated unlocated individuals in the UK, and Cohen, McCormick, and Plecas (2008) [32] and Sekela, Plecas, and Cohen (2010) [9] studied uncleared cases in Canada. These studies used descriptive analysis to evaluate a single variable, multiple variables, or a combination of both.

In Newiss' study, three main characteristics were selected: age, gender, and ethnicity, which were primarily provided by the Police National Missing Persons Bureau [31]. Newiss also included data on the length of time missing and analysed the data to produce results on singular and combined characteristics [31]. The study by Cohen, McCormick, and Plecas (2008) applied the same three characteristics and expanded beyond them, investigating variables such as occupation, time before being reported, and time the individual cases had been open for [32]. They accessed law enforcement data from the Canadian Police Information Centre (CPIC) and applied descriptive analysis to identify percentages of missing persons in various districts and to compare percentages of Aboriginal and non-Aboriginal people in selected Canadian districts [32].

Sekela, Plecas, and Cohen (2010) investigated jurisdiction (Alberta province of Canada), age, gender, and ethnicity, and considered reported age at the time of disappearance and the decade individuals went missing [9]. They used the same descriptive analysis approaches as the previous studies to recognise relationships among variables. They also referenced the CPIC database and the Royal Canadian Mounted Police (RCMP) archives as data sources [9].

This study also investigated the use of online data sourcing as an alternate avenue from which information was gathered and measured its viability pertaining to amount,

wholeness, and robustness of data on LTMPs. The study selected the same common univariate characteristics used in previous studies on outstanding missing persons cases: jurisdiction, age disappeared, gender, and ethnicity. These four characteristics have been analysed using central tendency, measures of variability, and frequency distribution. The methods of analysis were applied to determine if similar and/or different patterns could be seen between studies where datasets were obtained from different sources.

To ensure the accuracy and reliability of the data in this study, the data collection process was guided by the principles of triangulation and member checking. Triangulation refers to the use of multiple sources and methods to gather data, while member checking refers to the process of verifying the data with the relevant stakeholders. This ensured that the data collected was comprehensive and representative of the current practices and procedures implemented by law enforcement agencies in Australia.

3.2 Part I – Data Collection

This study recognises the six states and two territories of Australia as separate jurisdictions, providing results on Australia as a whole while also expanding findings to each individual jurisdiction. In line with previous research on missing persons and LTMPs, data sources traditionally utilised in Australian studies include law enforcement agencies or missing person units within these agencies. This study employs an alternative approach by utilising only publicly available data. Specifically, data from three NGO services were utilised, in contrast to the two used in previous research by James, Anderson, and Putt [6]. Additionally, access to law enforcement records were only utilised if they were found online. Using publicly available records, LTMPs were identified, and included or excluded based on a review of the information found. Upon conclusion of the study, all LTMPs have been de-identified. Using descriptive analysis on four selected characteristics: jurisdiction, age at disappearance, gender, and ethnicity, this study was able to generate inferences by means of a cross-sectional approach. It should be noted that this study is unable to determine cause-and-effect relationships between the chosen characteristics, but it provides preliminary data on which further research can be developed.

3.2.1 Stage one – Long-term missing persons source website identification

In Australia, the policy established by the ANZPAA stipulates that individuals who have been missing for a period exceeding three months are considered as LTMPs. This definition is widely accepted and applied by law enforcement agencies across the country. In line with this standard, the present study has adopted the criterion of "over three-month period" to determine

who is considered a LTMP. To collect data for the study, two websites were utilised: the National Missing Persons Coordination Centre (NMPCC), a government-run platform, and the Australian Missing Persons Register (AMPR), a private website. Both sources were deemed to be legitimate, providing credible information on unlocated missing persons. Individuals profiled on these websites were considered as potential participants in the study.

Stage one – NMPCC

The NMPCC was established in 2006 in response to recommendations made by the former Australian Federal Police (AFP) Commissioner Palmer in a report released in July 2005 [78]. The NMPCC absorbed the existing National Missing Persons Unit (NMPU), resulting in a greater commitment to addressing issues related to missing persons and providing support for their families.

The primary focus of the NMPCC is all missing persons, however, NMPCC only profiles individuals online who have been missing for a period of longer than three months. The NMPCC creates profiles based on information received from jurisdictional law enforcement agencies. Information posted as directed by each law enforcement jurisdiction is based on approval given by families, any impacts posting this information may have on current investigations and at the discretion of that jurisdiction. Additionally, the NMPCC also removes profiles of LTMPs following direction from the associated law enforcement agency.

It is worth noting that the NMPCC also maintains a presence on Facebook, however, for the purposes of this study, only those LTMPs profiled on the NMPCC website were considered in the data collection process. As LTMP data was collected based on who was consider LTMP as at, 19 May 2020, the NMPCC website was static in relation to information listed as opposed to a dynamic site such as Facebook.

Stage one – AMPR

In 2005, Nicole Morris established the AMPR website, which is a voluntary organisation that aims to raise awareness of missing persons [2]. In 2010, AMPR was registered as a Not-For-Profit Association, with its membership primarily composed of family members of missing individuals [2]. Unlike the NMPCC, AMPR generates profiles through two methods. The first method involves duplicating profiles as they appear on the NMPCC website, while the second approach involves creating profiles based on information received from concerned individuals seeking to locate a missing person [2].

Furthermore, AMPR may retain LTMP profiles on their website even after the NMPCC removes the profile. The AMPR will remove a profile at the request of law enforcement, the LTMP's family, or if the person has been located [2]. Additionally, AMPR

provides information about the location of the missing person, including copies of media releases and/or news reports. While AMPR is available for all missing persons, only LTMPs appear to be profiled on the website. AMPR also has a Facebook page, however, for the purposes of this study, only those missing individuals profiled on the AMPR website were considered. As LTMP data was collected based on who was consider LTMP as at, 19 May 2020, the AMPR website was static in relation to information listed as opposed to a dynamic site such as Facebook.

3.2.2 Stage two – Identification of LTMPs from source websites

On May 19, 2020, data was collected from the NMPCC and the AMPR as the primary sources for this study. This date was selected arbitrarily for the purpose of the research. The data collection process involved identifying all individuals listed on both websites and documenting their information using screenshots of each webpage from each source website. The focus of this data collection was on individuals classified as LTMPs.

Stage two – NMPCC

The NMPCC reported 678 individuals as LTMPs both within Australia and abroad as of May 19, 2020. Upon examination, it was determined that there were 677 LTMPs profiled on the NMPCC website. A discrepancy was identified, as page three of the website profiles only featured 24 LTMPs profiles, while it was expected that all pages, excluding the last page, would feature 25 profiles per page. This deviation, along with the presence of 3 profiles on webpage 28, resulted in a final tally of 677 LTMPs.

The NMPCC categorises missing persons into two groups: those who went missing within Australia (with the option to search by jurisdiction) and those who went missing abroad. For the purposes of this study, only those who went missing in Australia and then became a LTMP were included, individuals who went missing while overseas were excluded.

To gather data for this study, a Microsoft Word document was created for each individual LTMP. All websites and webpages relevant to that particular LTMP were copied and then pasted into that Microsoft Word document including each Uniform Resource Locator (URL).

Table 3–1 NMPCC LTMP jurisdiction categories.

| NMPCC LTMP jurisdiction categories | | |
|------------------------------------|------------------------------|-----------------------------|
| Western Australia | Queensland | Victoria |
| Northern Territory | New South Wales | Tasmania |
| South Australia | Australian Capital Territory | Australian Missing overseas |

Stage two – AMPR

The data collection process for the present study involved a comprehensive examination of the AMPR as a second primary source. The AMPR is a publicly accessible database that serves as a central point of reference for individuals who have been reported as missing in Australia. The AMPR was searched for LTMPs, which were defined as individuals who have been missing for a period of three months or more. The AMPR profiled a total of 1,230 LTMPs, both within Australia and overseas.

Upon examination of the AMPR website, it was noted that several of these individuals were included in multiple categories. This resulted in 176 cases of cross-categorisation, where an individual was profiled in more than one category. For example, an individual who went missing while hiking with their pet could be profiled in both the “New South Wales” category and “Persons missing with dogs” category (see Table 3–2 below for all categories).

Further analysis revealed that 159 of these cross-categorised individuals had their profiles listed twice, 15 were listed three times, and 2 were listed four times. This duplication of profiles was likely due to the various categories in which an individual could be profiled on the AMPR. Despite these instances of duplication, the total number of LTMPs profiled on the AMPR equalled 1,035. To ensure accuracy, individuals who appeared more than once on the AMPR were only counted in the first instance (see Table 3–3 below for a detailed breakdown of count).

To facilitate the data collection process, if no LTMP NMPCC Microsoft Word document existed, a new LTMP AMPR Microsoft Word document was created for that individual LTMP listed only on the AMPR website. All located websites and webpages relevant to that particular LTMP were copied and then pasted into that Microsoft Word document including each Uniform Resource Locator (URL).

In summary, the data collection process for the present study involved a thorough examination of the AMPR, which served as the primary source of information on LTMPs. Despite instances of cross-categorisation and duplication, the total number of individuals profiled on the AMPR equalled 1,035. Relevant information was then collected and saved in individual files for each missing person.

Table 3–2 AMPR LTMP categories.

| AMPR LTMP categories | | |
|--|---------------------------------|--|
| New South Wales Males | New South Wales Females | New South Wales Children and Teenagers |
| Queensland Males | Queensland Females | Queensland Children and Teenagers |
| Victoria Males | Victoria Females | Victoria Children and Teenagers |
| Western Australia Males | Western Australia Females | Western Australia Children and Teenagers |
| Tasmania Males | Tasmania Females | Tasmania Children |
| South Australia Males | South Australia Females | South Australia Children and Teenagers |
| Northern Territory Males | Northern Territory Females | Australian Capital Territory |
| 1970's and 1980's missing and murdered | Persons missing with dogs | Persons missing with vehicles |
| Aboriginal Missing Persons | Asian Missing Persons | International persons missing in Australia |
| Aussies missing overseas | What's going on in the Outback? | |

Table 3–3 Calculated number of unique LTMPs found on AMPR source website.

| Calculated number of unique LTMPs found on AMPR source website | | |
|--|------------------------------|--|
| LTMP | Multiple listings break down | Explanation |
| (318) | 159 | AMPR LTMPs profiled twice |
| (45) | 15 | AMPR LTMPs profiled three times |
| (8) | 2 | AMPR LTMPs profiled four times |
| (371) | 176 | Total breakdown of AMPR LTMPs profiled more than once |
| 1230 | | Total number of LTMPs identified on AMPR source website |
| (371) | | Remove total breakdown of AMPR LTMPs profiled more than once |
| 176 | | Add total number of LTMPs who were listed on more than one AMPR webpages and counted only once |
| 1035 | | Total number of LTMPs identified on AMPR source website included in study |

3.2.3 Stage three – Inclusion and exclusion of LTMPs

To ensure the integrity of the data and minimise any potential bias in relation to sampling, an inclusion and exclusion criteria were established for this cross-sectional study. A two-stage process was utilised to identify individuals who met the criteria for inclusion and exclusion.

The first stage involved identifying LTMPs from the NMPCC and the AMPR. The second stage of the process involved a more detailed examination of the data to ensure that all individuals who were included in the dataset met the established inclusion criteria.

Five inclusion criteria were established for this study, and they were applied to all LTMPs found on both the NMPCC and the AMPR websites. This approach ensured that the sample was representative of the population of interest and that any biases in the data were minimised.

Stage three – Inclusion criteria

To be included in this study, participants were required to meet the criteria of being considered missing for a duration of more than three months and remained unlocated as of May 19, 2020.

Data was collected from two primary sources, namely the NMPCC and the AMPR. The selection process involved identifying individuals through these sources rather than through random searches. Additionally, participants were required to have vanished within Australia and be associated with an identifiable law enforcement jurisdiction responsible for their case. In instances where individuals were identified through both sources, they were recorded only once, with a note of their presence on both websites (see Table 3–4 below for full inclusion criteria).

Stage three – Exclusion criteria

The data collection process for this study involved reviewing the NMPCC and the AMPR websites. Individuals were excluded from the study if they were missing for less than three months and/or located prior to May 19, 2020, additionally, individuals who vanished while overseas were excluded. Additionally, those LTMP cases lacked a clearly identified law enforcement jurisdiction were also omitted, (see Table 3–4 below for full exclusion criteria). An identifiable law enforcement jurisdiction responsible for a LTMP case was required to enable minimal univariate analysis to be carried out, that being jurisdiction.

Table 3–4 Initial inclusion and exclusion criteria for cross-sectional LTMP study.

| Initial inclusion and exclusion criteria for cross-sectional LTMP study | |
|--|---|
| Inclusion | Exclusion |
| Considered LTMP i.e., missing long than three months | Missing for less than three months |
| Missing as at 19 May 2020 | No longer missing, as located prior to or including 19 May 2020 |
| Vanished while in Australia | Missing while overseas |
| Law enforcement jurisdiction responsible for case identified | No law enforcement jurisdiction responsible for case located |
| Located on both or either source websites NMPCC and/or AMPR | |

Stage three – NMPCC

In the present study, data collection was performed on the 677 LTMPs listed on the NMPCC website as of May 19, 2020. These individuals were defined as missing for a period of greater than three months. It was found that 22 of these LTMPs had vanished while overseas. Additionally, all individuals listed were found to have a law enforcement jurisdiction responsible for their respective cases. Further analysis revealed that 624 of the LTMPs were listed on both source websites, while the remaining 31 were listed only on the NMPCC website.

Stage three – AMPR

The data collection process for this study was a crucial step in identifying a sample of LTMPs for analysis. The AMPR website was the other primary source of data, as it lists individuals

who have been missing for longer than three months. A total of 1,035 individuals were listed on the website at the time of data collection who went missing in Australia, however, one individual was discovered to have gone missing while overseas and was therefore excluded from the study as the focus was on missing persons within Australia.

An additional six individuals were also excluded from the study due to uncertainty surrounding their law enforcement jurisdiction. This was determined through a thorough examination of the information provided on the website and any other available sources.

To ensure that no individuals were missed, the data collected from the AMPR website was compared to those on NMPCC. This comparison revealed that 624 individuals were listed on both websites. These 624 were only included once in the study.

The initial inclusion and exclusion stage resulted in 404 individuals being identified as suitable for inclusion in the study who were only listed on the AMPR. These individuals were listed only on the AMPR website and had failed to be located at the time of data collection. It is important to note that the AMPR website provided information on individuals who had since been located, however, this information was ignored during the initial stage of inclusion and exclusion.

Finally, additional searches were conducted to ensure that all potentially eligible individuals were identified and included in the study. It was found that some individuals were listed on the AMPR website but were unlocated during the initial identification stage. Any LTMPs that failed to be profiled on the AMPR website and only located when searched for by name were excluded from the initial AMPR LTMP counts. It is unknown why some LTMP's were only located on the AMPR website when a search by name was conducted as opposed to being profiled and accessible by AMPR categories. This highlights the importance of conducting multiple searches and cross-referencing information from different sources to ensure a comprehensive and accurate sample of LTMPs are identified.

3.2.4 Stage four – Data gathering and excluding located LTMPs

The data collection process for this study involved the development of a list of LTMPs on whom to collect data. This was accomplished during the actual data gathering phase by utilising names of LTMPs that had already been identified as meeting the inclusion criteria from the NMPCC and AMPR websites. Additional information was then located from various online sources.

A total of 1,059 LTMPs were searched, with 31 being found only on the NMPCC, 404 only on the AMPR, and 624 on both the NMPCC and AMPR. In order to gain additional information, searches were conducted on over 6,700 online sources, with some instances resulting in multiple LTMPs being listed on the same webpage. Furthermore, 177 Coroner

reports or findings were located, and two (one included two persons) were requested and received by email from the associated Coroner's Court. The approximate final count of all source sites accessed in relation to this study, including those of the NMPCC and AMPR, totalled more than 6,700.

Stage four – Online search strategy

To gather a comprehensive dataset of LTMPs, a multi-faceted approach to data collection was employed. The primary sources of information were from the NMPCC and the AMPR website, which a total of approximately 2,000 records including duplications, were located. It was noted however that certain critical pieces of information were frequently omitted or limited in these records, such as exact date of birth (DOB), age at time of disappearance, and ethnicity. To address this, additional online sources were consulted to supplement and verify the information obtained from the primary sources (Table 3–5 below illustrates the types of information that were frequently missing or limited in the primary sources). Further investigation was conducted to obtain as much missing information as possible.

Table 3–5 Possible missing information from LTMPs profiles.

| Missing information from some LTMPs profiles |
|---|
| Day and/or month and/or year of birth |
| Age at time of disappearance |
| Day and/or month and/or year when person vanished |
| Gender where gender was listed as other |
| Ethnicity or information to identify ethnicity |

The data collection process for this study involved utilising the NMPCC and AMPR websites to identify LTMPs. Google Chrome was utilised as the main browser to conduct searches using the names of the missing persons as the primary search term. Alternative names, including first, middle and surnames, were also utilised, including complete names, first and last name only, and variations such as honorifics, aliases, nickname/pet name such as Robert to Bob/Rob/Robby/Bobby, and spelling variations (Table 3–6 below is a complete list of name search options). Additional names were searched for when located in online documentation, and relevant URL were recorded in files allocated to the specific missing person or added to all relevant files when multiple names were mentioned.

Additional online sources, such as Trove, the Doe Network, law enforcement websites, social network websites, media websites, WebSleuths, and other missing person information websites, cemetery listings, and ad hoc websites were also accessed to gather information (Table 3–7 below is a complete list of additional online sources). This process was conducted up to and including 31 December 2021, and any missing persons identified

retrospectively as located as at 19 May 2020 were excluded from the study. Data collection was finalised on the 31 December 2021 to allow time for analysis.

Table 3–6 Alternative name search options for LTMPs.

| Alternative name search options for LTMPs |
|---|
| Complete name |
| Part name i.e., first and/or last name only |
| Including/excluding honorifics i.e., Mr, Mrs, Dr, etc |
| Aliases |
| Sobriquets i.e., nicknames |
| Hypocorism i.e., pet names |
| Diminutives (name shortening) i.e., such as Robert to Bob, Elizabeth to Buffy |
| Family name |
| Married name |
| Name changes |
| Name spelling errors |
| Alternate spelling i.e., Smith to Smyth |
| Username and/or online name |

Table 3–7 Additional online sources accessed for LTMP data collection purposes.

| Additional online sources for data collection purposes |
|---|
| Trove – maintained by National Library of Australia and is a collection of digital records from government organisations and NGOs |
| The Doe Network |
| Missing and Murdered |
| Jurisdictional law enforcement websites i.e., media releases |
| Social network websites i.e., Facebook, LinkedIn |
| News media websites |
| Websites dedicated to investigating missing persons and unsolved crime i.e., WebSleuths |
| Cemetery websites |
| Various ad hoc websites found based on LTMPs name i.e., Way Back Machine |

After the completion of the exclusionary procedures, data collection was then focused on obtaining online Coroner's reports and findings from Coroner's courts within the relevant jurisdictions (as outlined in Table 3–8 below). Through these searches, a total of 160 (15%) reports were obtained from the designated Coroner's courts [79]–[86], with an additional 17 (2%) reports sourced from alternative avenues.

Table 3–8 Coroner reports/findings source locations.

| Online sources that provided Coroner reports/findings |
|--|
| ACT Courts [79] |
| Coroners Court NSW [80] |
| Supreme Court NT [81] |
| QLD Courts [82] |
| Coroner's Court of SA [83] |
| Magistrates Court of TAS [84] |
| Coroners Court of VIC [85] |
| Coroner's Court of WA [86] |
| Email from associated Coroner's Court |
| Archived documentation, i.e., Trove, archives.org.au, Wayback Machine |
| Australasian Legal Information Institute (Austlii) |
| AMPR |
| Police Integrity Report |
| Missing Coroner's report (only information) – short electronic statement that says the "place, manner and cause of death" is uncertain |

Stage four – NMPCC

The data collection process for this study involved a comprehensive examination of LTMPs listed on the NMPCC website. Initially, a total of 31 LTMPs were identified that were exclusively listed on the NMPCC website. Additionally, 624 LTMPs were identified that were listed on both the NMPCC website and the AMPR website.

Subsequently, a thorough evaluation of external websites was conducted to determine the current status of LTMPs listed on the NMPCC website. As a result of this evaluation, it was determined that two individuals had been located prior to 19 May 2020. Both of these individuals were listed as long-term missing on both the NMPCC website and the AMPR website.

Based on the findings of this data collection process, the final count for LTMPs included in the study was 31 individuals exclusively listed on the NMPCC website and 622 individuals who were profiled on both the NMPCC website and the AMPR website.

Stage four – AMPR

The data collection process for this study involved an initial assessment of the number of LTMPs listed on the AMPR website. This yielded a total of 31 listed only on NMPCC, 404 listed on the AMPR and 624 individuals who were listed on both the source websites. A subsequent evaluation of external websites was conducted to determine the status of these individuals, resulting in the discovery that 16 had been located. Of these, 14 were listed as long-term missing only on the AMPR website, while the remaining two were found on both the NMPCC and the AMPR website. The final count of LTMPs included in the study, as

determined by those listed on the AMPR website, was 390 individuals who were only listed on the AMPR and 622 individuals who were profiled on both the NMPCC and the AMPR. The final count of LTMPs in study totalled 1043.

3.2.5 Part I – Summary

The data collection process for this study involved the gathering of information on a sample of LTMPs from two sources: the NMPCC and the AMPR. The sample size consisted of 1,043 individuals, including 31 individuals who were only listed on the NMPCC, 390 individuals who were only listed on the AMPR, and 622 individuals who were listed on both websites.

To compile the dataset, information was obtained from online sources to create a dossier (a collection of online webpages and/or documents) for each LTMP. The data collected was then analysed in a descriptive manner to identify patterns and trends in the data (refer to below Section 3.3, Dataset design). The collection and analysis of this data aimed to provide a comprehensive overview of the LTMPs sample and highlight any noteworthy characteristics or tendencies.

3.3 Part II – Dataset design

The dataset used in this study was specifically curated for the purpose of analysis. The descriptive approach was deemed the most appropriate as it enables a comprehensive summarisation of key insights through the identification of patterns. Based on previous research in the field of missing and LTMPs, four major characteristics were selected, including jurisdiction, calculated age, gender, and ethnicity. To further refine data selection and calculation, an additional four minor characteristics were included in the study (see below Table 3–9 of both major and minor characteristics). These minor characteristics consisted of date of disappearance, DOB, age reported missing, and if a Coroner’s report was found, the date of the Coroner's report. The minor characteristics are intended to provide an insight into available online information only. Unlike the major characteristics no further analysis beyond this chapter was carried out.

Table 3–9 Major and minor characteristics of LTMPs.

| Major and minor characteristics of LTMPs | |
|--|--|
| Major | Minor |
| Law enforcement jurisdiction responsible for LTMP case | Date disappeared, i.e., complete date, month and year or year only |
| Calculated age i.e., date disappeared based on DOB | DOB i.e., complete date, month and year or year only |
| Gender | Reported age disappeared |
| Ethnicity | Coroner’s report/date/if located |

The data collection process for determining the reliability of information on LTMPs located on websites and webpages (refer to Table 3–10 below for other online sources accessed) involved the creation of a specific best practices document credibility list (Appendix V). This list was referred to and applied when conflicting information existed, such as DOB, age when disappeared, name, ethnicity, and location disappeared from. In instances where conflicting information existed within the same source website, albeit historically, the earliest document was given precedence. The rationale behind this decision is based on the premise that as a document is replicated over time, the likelihood of editing errors occurring increases.

When there was a conflict in the reported age of a missing person, consideration was given to the source of the information. Law enforcement was generally considered the most accurate source, however, if social media accounts such as Facebook were located and over time, family/friends provided an age or gave birthday wishes to the LTMP, then social media was determined the most accurate. The final consideration in relation to reported age was the number of times an age was listed on official law enforcement websites, current and historical. If an age was listed that was impossible to be correct, i.e., born after an individual went missing, then the age that was reported most commonly was included in the data analysis.

This same approach was also taken when conflicting dates of birth existed, whether it be an exact DOB, where only a month and year of birth were located, or only the year of birth. The only variation to this approach was if an image of a headstone included a birth date, or if historical birthday congratulations were listed on the LTMP's social media. In both these cases, a headstone date or consistent social media birthday acknowledgments were accepted as the most accurate.

Table 3–10 Source websites/webpages reliability precedence order.

| Source websites/webpages reliability precedence order |
|--|
| Coroner's Report |
| Law enforcement media release (including archived) |
| NMPCC and/or AMPR |
| Trove – online library of current and historical information obtained from universities, museums, galleries, and archives [87] |
| Crime Stoppers [88] |
| Ancestry records |
| Cemetery records/images |
| News/media reports |
| Social Network/media platforms i.e., LinkedIn, Facebook |
| Random ad hoc websites/pages |
| Birth dates |
| Coroner's Report |
| Headstone |
| Social Network/media platforms i.e., LinkedIn, Facebook |
| Law enforcement media release (including archived) |
| NMPCC and/or AMPR |
| Trove – online library of current and historical information obtained from universities, museums, galleries, and archives [87] |
| Crime Stoppers [88] |
| Ancestry records |
| Random ad hoc websites/pages |

Data collection for this study was conducted over a 20-month period, spanning from May 2020 to December 2021. The 19 May 2020 was an arbitrary date, and the 31 December 2021 was selected to allow time for data analysis. Primary data was obtained from primary sources, with a focus on collecting information related to four key characteristics: jurisdiction, age at time of disappearance, gender, and ethnicity. Additional information, such as DOB, date of disappearance, and the presence of a Coroner's report, were also recorded. To ensure the reliability of the data, a hierarchical process was employed, which involved conducting additional searches to fill in any gaps in information. Information was sourced from a variety of websites, with a focus on primary, secondary, and tertiary sources. The use of larger primary source websites, in conjunction with a Google search, allowed for a more comprehensive data collection process. Ultimately, 1,043 LTMPs were included in the study, all of whom had the majority of the necessary information publicly available. The LTMP dataset was constructed to include the following variables: jurisdiction, date of disappearance, calculated age, reported age, gender, ethnicity, DOB, age at the time of the study (19 May 2020), presence of a Coroner's report/finding, and date of Coroner's report/finding.

3.3.1 Dataset cleaning

The LTMP dataset consisted of data from all states and territories within Australia, including the Australian Capital Territory (ACT), NSW, NT, QLD, South Australia (SA), Tasmania (TAS), Victoria (VIC), and Western Australia (WA). The calculated age of each missing person was determined by subtracting their birth date from the date they were listed as missing, vanished, or last seen. Birth dates were established through three methods: exact birth date (day, month, and year), birth month and year, or birth year only. In instances where only a birth year was available, the birth date was set to January 1st of that year, which may result in a maximum variance of one year between calculated and reported age. This variance was assessed prior to analysis and found to be insignificant (<0.5%) with a maximum total difference of 10.5 years of all LTMPs. As a result, the calculated age was used for analysis and the reported age was disregarded. Ages, except for those under one year old, were rounded down to the nearest whole year, while those under one year old were rounded down to the nearest month. These calculated ages were then compared against the ABS Estimated Resident Population (ERP) data as of June 30, 2020, to determine proportionality to the general population [89]–[90].

In addition to age, gender was also included as a characteristic in the LTMP dataset. Gender was identified for all missing persons profiled on the NMPCC and the AMPR. The gender data showed 703 (67%) missing persons to be male, 339 (33%) to be female, and 1 to be other. This gender data was also compared against the ABS ERP data as of June 30, 2020, to determine proportionality to the general population [89]–[91].

The ethnicity of the LTMPs was determined through a two-step process, utilising the ABS categories and overarching definition provided by ABS [92]. Ethnicity encompasses common cultural characteristics such as language, ancestry, and recognisable cultural features [92]. ABS lists three tiers of ethnicity, including “Broad,” “Narrow,” and “Cultural and ethnic groups” [92]. For the purposes of this study, the “Narrow” (tier two) category was applied to separate the ethnicities of the LTMPs. Out of the 28 categories in tier two, this study identified 17, in addition to Caucasian and five categories that were combined into a single category referred to as “Other” ethnicity. If there were two or less LTMPs belonging to a particular category, they were combined and listed as “Other”. The final number of LTMPs with an identified ethnicity was 886 (85%).

The first step in determining the ethnicity of the LTMPs involved utilising any clear descriptions found in the documentation that fit the ABS “Narrow” category. The second step was applied when no obvious ethnicity could be located, and in some cases, required extensive investigation to determine the ethnicity of the LTMP. The investigation focused on key points,

such as place of birth, image, ancestry information, name, group membership or awards, and other ad hoc information that could assist in identifying ethnicity. Multiple key points needed to be established before an ethnicity could be considered as inferred.

For individuals listed as Caucasian, both steps were also applied to determine their ethnicity. Caucasian was only applied if no ethnicity could be located and the documentation identified the individual as Caucasian or as having white, fair, or similar physical descriptions, or if they were listed as Australian. A specific ethnicity was attempted to be located where possible.

The data collection process for this study focused on several key variables including DOB, date disappeared and date of Coroner's report/findings. The age as at 19 May 2020 was determined through an automatic calculation based on the established DOB and date disappeared. The presence of a Coroner's report/findings and its respective date were similarly recorded in the dataset through an automatic process. The date of disappearance was recorded to ensure that all LTMPs had been missing for a minimum duration of three months. The date disappeared and the date relating to any Coroner's report/findings, were excluded from analysis due to being beyond the scope of the study.

3.3.2 Additional information

During the data collection phase of the research, a thorough examination of public records was conducted and could identify over 140 characteristics belonging to LTMPs (Appendix A). Utilisation of various online sources allowed for the identification of additional information, as well as the determination of data that was found to be relevant to a specific individual. Due to the limited scope of the current study however, the majority of the identified information was excluded from the analysis.

3.3.3 Part II – Summary

In this study, a total of 1,043 LTMPs, who were determined as missing on 19 May 2020, were identified and included in the analysis. Data for law enforcement jurisdiction, age of disappearance, gender, and ethnicity were collected for each individual. Of these 1,043 individuals, 812 (78%) had complete data for all major characteristics, while 184 (18%) had data missing for one major characteristic, and 47 (5%) had data missing for two major characteristics. All LTMPs had complete data for jurisdiction and gender. A total of 74 (7%) individuals had missing data for calculated age, 110 (11%) individuals had missing data for ethnicity, and 47 (5%) individuals had missing data for both calculated age and ethnicity. Any information that was unable to be located was recorded as "unknown." The collected data was

cleaned and analysed, and the results were compared against ABS ERP to determine any over or under representations. The analysis and results can be found in "Chapter 5 – Results", and the discussions on the results can be found in "Chapter 6 – Discussion".

CHAPTER 4

DATASET

4.1 Data Collection and Pre-Processing

In this study, the data collection process focused on identifying commonalities among LTMPs in Australia. A LTMP was defined as an individual who has been unlocatable for a period of more than three months, as per the definition provided by the NMPCC. The total number of LTMPs in Australia, as of 19 May 2020, was estimated to be 2,600 [28].

To be included in this study, a person needed to meet the following criteria: be considered long-term missing as of 19 May 2020, be listed on either the NMPCC website or the AMPR website and have a law enforcement jurisdiction responsible for their case. Prior to external source websites, applying these inclusion criteria resulted in the identification of 1,067 LTMP.

A final assessment for inclusion was then conducted, using the following exclusion criteria: going missing while overseas; being located prior to 19 May 2020 but had failed to be removed from the source websites; and limited data availability about the missing person. After evaluating external sources, a total of 24 were removed from the study, resulting in a final sample of 1,043 LTMPs (as shown below in Figure4–1).

The distribution of the LTMPs in the sample was 31 (3%) from the NMPCC only, 390 (37%) from the AMPR only, and 622 (60%) from a combination of both websites. This sample represents approximately 40% of the total estimated population of LTMPs (2,600) in Australia.

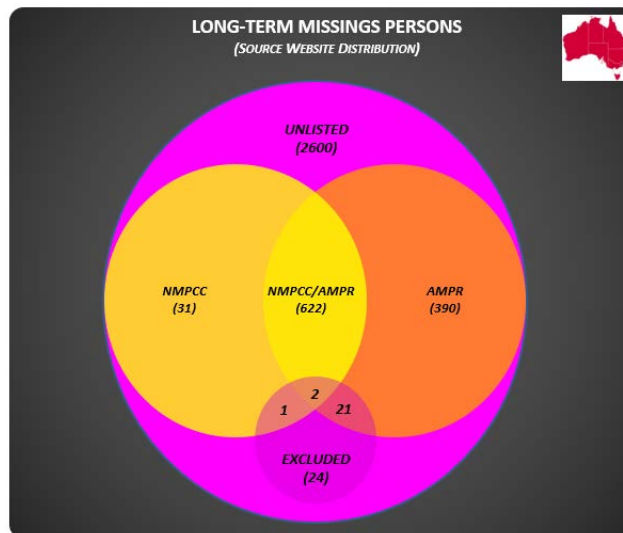


Figure 4-1 Distribution of LTMPs from source websites, NMPCC, AMPR, and NMPCC/AMPR, and count of those excluded from study.

4.2 Australia – Source Websites

In Australia, individuals who remain unlocated for a period exceeding three months are considered to be LTMPs, as determined by policy rather than legal definition. According to the NMPCC, there are currently over 2,600 such individuals in Australia [93]. This information is based on yearly reports received from each law enforcement jurisdiction, and the number of LTMPs may fluctuate each year [94]. LTMP information is posted as directed by each law enforcement jurisdiction. The decision to release information at the discretion of that jurisdiction as some cases may be unsuitable for publication [94], no literature is available that specifies the exact reasons for limiting the release of all LTMP cases.

To obtain information on LTMPs in Australia, the study utilised raw data from two sources: the NMPCC (a government website) and the AMPR (a private website). Ethical approval and the potential release of confidential information presented challenges in accessing the datasets held by law enforcement. To address those issues the study created original datasets using publicly available information. Using online sources was only able to identify approximately 40% of the 2,600 (on average) [93] LTMPs in Australia.

The study identified three groups of LTMPs, comprising approximately 2,600 individuals in total. The first group, comprising 58.96% of the total, were unlisted on either of the two source websites and may have been omitted for various reasons, including impacting ongoing investigations or being located, or at the discretion of family members. The second group, comprising 0.92% of the total, were excluded from the study due to reasons such as being located prior to the study's reference date or having limited data available. The final group included in the study, comprising 40.12% of the total, consisted of individuals whose

information was listed on the NMPCC and AMPR as of 19 May 2020 (illustrated below in Figure 4–2).

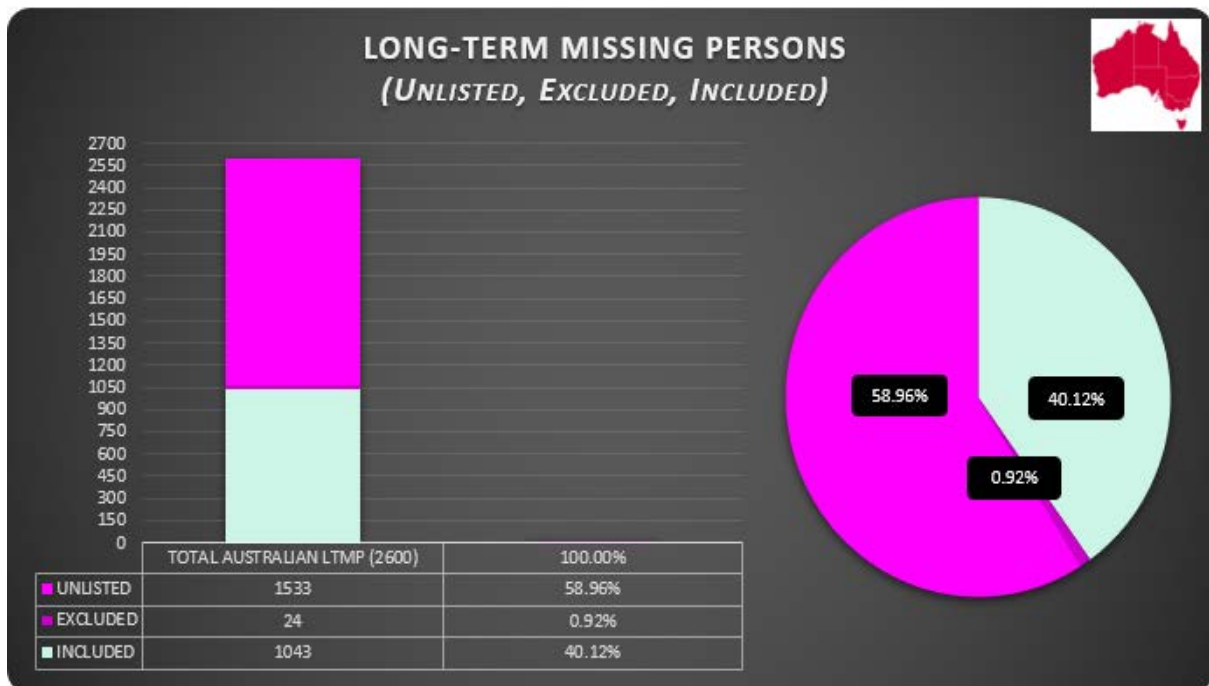


Figure 4–2 Distribution of unlisted, excluded, and included LTMPs as profiled on NMPCC or AMPR, and NMPCC/AMPR based on the approximate 2,600 who have yet to be located.

The research process began by collecting thirteen variable which were the considered base data (as outlined below in Table 4–1). All information was collected and store in Microsoft Excel worksheets. This data was used for both analysis and the establishment of additional data variables. The jurisdiction of each LTMP’s case was identified as the state or territory of the law enforcement agency responsible for the case. The DOB was determined based on the information available. If a complete date was provided, it was used as-is. If only a month and/or year were provided, the first day of that month or of January was the determined DOB. In cases where no date was provided, the DOB was recorded as unknown. The same DOB was used to determine the age of the missing person as of 19 May 2020, the date of the study.

Table 4–1 Summary of data collected.

| Variables for analysis | Characteristics | | Explanation of repurposed data |
|--------------------------|-----------------|-------|--|
| | Major | Minor | |
| Source websites | X | X | Utilised for creation of LTMP dataset: NMPCC and AMPR |
| Jurisdiction | X | | Law enforcement agency responsible for LTMP case |
| DOB | X | | Calculated age disappeared |
| | | X | Calculated age as at 19 May 2020 |
| Reported age | X | | |
| Gender | X | | |
| Ethnicity | X | | |
| Date disappeared | | X | Determine day of the week |
| | | X | Determine month |
| | | X | Determine year |
| Month born | | X | Determine month |
| Coroner's report | | X | Yes or no or possibly |
| Year of coroner's report | | X | Calculated years between disappearing and official cause |

The data collection process for this study involved obtaining demographic information from documentation on LTMPs. The age, gender, and ethnicity of each individual were recorded as reported in the available documentation. The date of disappearance was also noted, as well as the month and year of birth and disappearance when available.

To facilitate analysis, the data was divided into major and minor characteristics. Major characteristics refer to variables commonly used in previous research on missing persons in Australia, while minor characteristics are variables that have received limited or no attention in previous research. The inclusion of minor characteristics in this study aims to demonstrate the additional information that can be obtained through online searches. Due to time constraints however, limited descriptive analysis was conducted on these variables (refer below to Section 4.8).

The data was collected from various online sources, including the NMPCC and the AMPR. Using the LTMP DOB the age at disappearance was calculated, this age was referred to as “Calculated Age” as opposed to “Reported Age”. Reported age is the stated age found in the online information relating to a specific LTMP. The study then utilised the identified variables for univariate and multivariate analysis to determine if any significant relationships existed.

4.3 Understanding the two source websites

For the purposes of this study, data on LTMPs within Australia were collected from two primary sources: the NMPCC and the AMPR. The NMPCC, an arm of the AFP, serves as a resource for information and profiles of LTMP, while the AMPR, a privately managed website,

also provides profiles of LTMPs. Both sources were systematically searched to acquire the names and relevant data of the study population.

4.3.1 NMPCC

The data collection process for this study began with the identification of the base study group from the NMPCC, a non-operational arm of the AFP and a government website. The NMPCC receives selected information from missing persons law enforcement units in each Australian state and territory, and releases details about LTMPs in Australia based on decisions made by the respective law enforcement jurisdiction. This public website allows for the opportunity for valuable information to be provided to the appropriate law enforcement agency to advance or finalise missing persons cases. According to the NMPCC, there are an average of 2,600 (approximately) LTMPs still outstanding in Australia.

This research utilised the LTMPs profiled on the NMPCC as the source website. Individuals listed as missing overseas were excluded from the study, as well as any duplicate listings or individuals who had been located prior to 19 May 2020. The final number of individuals included in the study from the NMPCC was 653 (63%), a combination of 31 (3%) missing persons profiled only on the NMPCC and 622 (60%) missing persons profiled on both the NMPCC and the AMPR (see Table 4–2 below for detailed breakdown).

4.3.2 AMPR

In this study, the AMPR website was utilised as a secondary source for identifying LTMPs. The AMPR is a privately owned website that is unaffiliated with law enforcement. It provides however, information on the same LTMPs as the NMPCC and also accesses other sources such as family members, media reports, and official law enforcement websites and media releases [2]. The AMPR also maintains the profiles of LTMPs indefinitely, unless located, requested by law enforcement or family members to be removed.

To gather data, the AMPR website was accessed and used to expand the list of LTMPs. Any person listed as missing overseas was excluded from the study. Additionally, one person was found to be missing while overseas and was subsequently removed from the study. Duplicate listings were removed, meaning the combined multiple listing resulted in 176 individuals were included only once in the study. Furthermore, six individuals were removed from the study due to limited information on their circumstances and 14 individuals who had been located prior to 19 May 2020 were also removed from the study.

In total, 1,012 (97%) individuals were included in the study from the AMPR. This figure was a combination of 390 (37%) LTMPs that were only listed on the AMPR website

and 622 (60%) that appear on both the NMPCC website and the AMPR website (see Table 4–2 below for detailed breakdown).

4.3.3 NMPCC/AMPR

The data collection process for this study involved utilising both the NMPCC and the AMPR as primary sources of information. A total of 624 LTMPs who vanished while in Australia were identified on these two websites. To ensure the integrity of the data, any duplicate entries were removed during the cleaning process. Furthermore, two LTMPs who were located prior to 19 May 2020 were also removed from the study, resulting in a final sample of 622 (60%) LTMPs. These individuals were counted only once and were included in the study as they were identified on both the NMPCC and AMPR (see Table 4–2 below for detailed breakdown).

Table 4–2 Summary of excluded data.

| Source website | Excluded reason | ACT | NSW | NT | QLD | SA | TAS | VIC | WA | Unknown | Total |
|----------------|------------------|-----|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| NMPCC | Located | | | | | | | | | | |
| NMPCC | Missing overseas | | 1 | | | | | | | | 1 |
| NMPCC | Limited data | | | | | | | | | | |
| NMPCC | Unknown | | | | | | | | | | |
| AMPR | Located | | 3 | 1 | 5 | 1 | | 4 | | | 14 |
| AMPR | Missing overseas | | 1 | | | | | | | | 1 |
| AMPR | Limited data | | 1 | | | | 1 | 1 | 1 | | 4 |
| AMPR | Unknown | | | | | | | | | 2 | 2 |
| NMPCC/AMPR | Located | | 1 | | | | | 1 | | | 2 |
| NMPCC/AMPR | Missing overseas | | | | | | | | | | |
| NMPCC/AMPR | Limited data | | | | | | | | | | |
| NMPCC/AMPR | Unknown | | | | | | | | | | |
| Total | | | 7 | 1 | 5 | 1 | 1 | 6 | 1 | 2 | 24 |

4.4 Understanding Calculated Age (based on DOB)

In the present study, data pertaining to the DOB of LTMPs was collected through various online sources such as websites and Coroner reports. Three types of birth dates were determined for the purpose of this study: actual, month and year only, and year only.

Actual dates of birth, comprising day, month, and year, were identified for 495 (47%) individuals out of the total LTMPs included in the study. In cases where only a month and year were located, the DOB was recorded as the first day of that month and year, e.g., 1 May 2020. A total of 12 (1%) individuals were identified as having month and year only for their birth date.

Year only dates of birth were identified for 415 (40%) individuals, and the DOB was recorded as the first day of January of that year, e.g., 1 January 2020. In 121 (12%) instances, no exact or partial DOB could be identified, and these individuals were classified as unknown (details of DOB information is shown below in Figure 4–3).

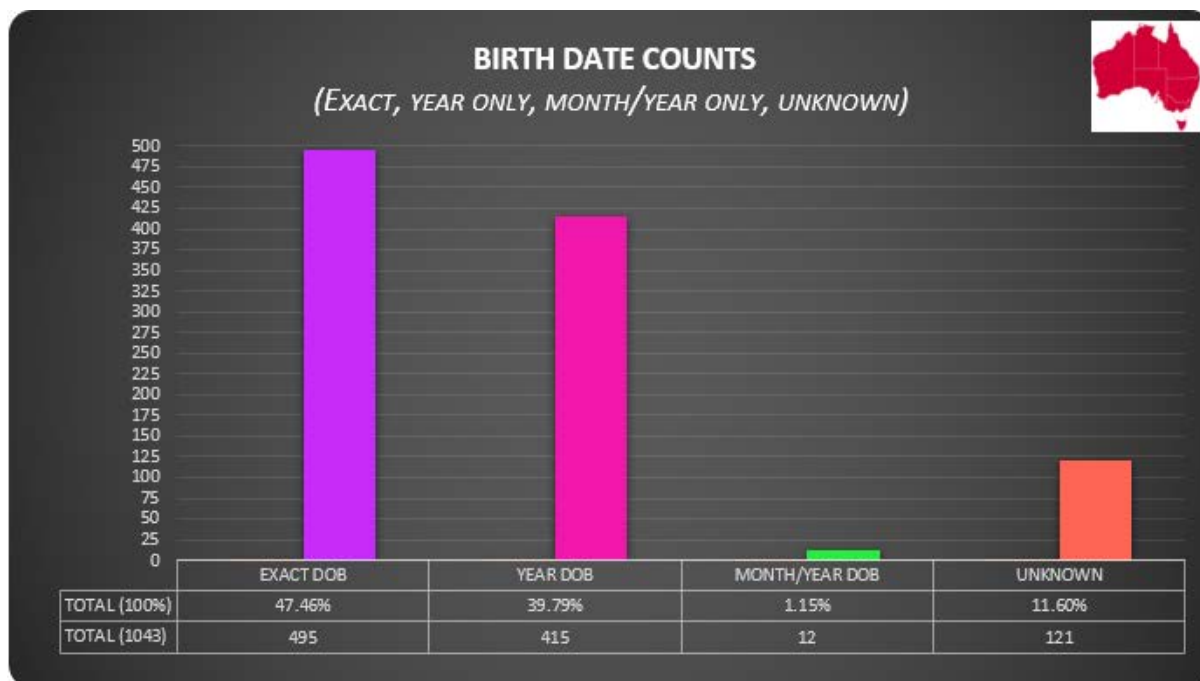


Figure 4–3 Birth date counts of LTMPs where exact, year only, month/year have been located and those unknown.

4.5 Additional data collection sources

The data collection process for this study involved utilising information from multiple sources. In addition to data on LTMPs identified from the NMPCC and the AMPR, data was also obtained from over 4,500 other webpages. The search criteria applied when locating this additional information was the LTMPs name or variations. Utilising the name of the LTMP, revealed information from various online sources.

To ensure the reliability of the information obtained from these additional websites and webpages, a document credibility and precedence list was created. This list established a “Reliability Precedence Order” of document legitimacy (see Table 4–3 below for the reliability precedence list of documents in descending order). In cases where multiple documents with conflicting information were released by the same provider, the earliest document was given precedence.

Table 4–3 Document credibility and precedence order of data from source websites and additional websites/webpages.

| Source websites/webpages reliability precedence order |
|--|
| Coroner's Report |
| Law enforcement media release (including archived) |
| NMPCC and/or AMPR |
| Trove – online library of current and historical information obtained from universities, museums, galleries, and archives [87] |
| Crime Stoppers [88] |
| Ancestry records |
| Cemetery records/images |
| News/media reports |
| Social Network/media platforms i.e., LinkedIn, Facebook |
| Random ad hoc websites/pages |
| Birth dates |
| Coroner's Report |
| Headstone |
| Social Network/media platforms i.e., LinkedIn, Facebook |
| Law enforcement media release (including archived) |
| NMPCC and/or AMPR |
| Trove – online library of current and historical information obtained from universities, museums, galleries, and archives [87] |
| Crime Stoppers [88] |
| Ancestry records |
| Random ad hoc websites/pages |

4.6 Characteristics

In Australia, as at 2020, there were 38,000 people reported to law enforcement as missing annually [58], this increased to over 51,000 in 2021 people reported. This study accepted the 2020 figure as the point of reference. At any one time, on average, there are approximately 2,600 individuals who have been reported to law enforcement, however, have failed to be located within three months. Unlike missing person counts this figure has remained static as reported on the NMPCC website. These individuals become known as LTMPs [58]. Some studies indicate that any figures on LTMPs, in Australia and internationally, are underestimated [39]. The suggested reasons for this include, others being unaware that a person is missing, or a person who goes missing fails to be reported, “intentionally” or “unintentionally”, to law enforcement [39]. These causes suggest that the overall figures on missing persons and LTMPs are on the conservative side.

This study aims to further investigate the characteristics of LTMPs in Australia by analysing data from two well-established sources, the NMPCC and the AMPR. The study utilises a sample of 1,043 LTMPs who were identified as potential candidates for the study and met predetermined inclusion criteria such as being missing as of 19 May 2020, being listed on

the NMPCC and/or AMPR and having a known law enforcement jurisdiction responsible for the case.

The study will focus on analysing four major characteristics of the sample including jurisdiction, reported age, gender, and ethnicity. In addition, the study will also analyse three variables, source website(s), calculated age when missing, and calculated age as of 19 May 2020. Furthermore, six minor characteristics will also be analysed, including date disappeared, month disappeared, year disappeared, DOB, birth month and the existence of a Coroner's report/finding.

The analysis of the major characteristics is important as it supports existing data and validates the worth of choosing these specific attributes in studies on missing persons. The inclusion of the additional variables and characteristics will provide an opportunity to evaluate their benefit in future studies on LTMPs.

4.7 Characteristics – Major

Jurisdiction

The data collection process for this study involved determining the jurisdiction of each LTMP. Jurisdiction refers to the state or territory in Australia where an individual is believed to have vanished and is generally considered the responsibility of the law enforcement agency of that area.

To determine jurisdiction, information was sourced from the NMPCC's website(s) and, in cases where the missing person was only listed on the AMPR website(s), jurisdiction was applied as listed on the latter source. In instances where jurisdiction failed to be found on either source, an online search was conducted using the missing person's name on state or territory official law enforcement webpages, both current and archived, to establish jurisdiction.

As a result of this process, all 1,043 LTMPs included in the study have a known jurisdiction.

Calculated age

In this study, the concept of "calculated age" was utilised to determine the age of LTMPs based on their DOB. When an exact DOB (Appendix B) was unavailable, the calculated age was calculated based on DOB using the first of the birth month and year if known (Appendix C), finally the 1 January of a given year when only the year is known (Appendix D). Out of the 1,043 LTMPs included in the study, 922 (88%) individuals had a minimum year of birth that could be located, enabling the estimation or accurate establishment of their age. The calculated

ages of these individuals ranged from less than one year to 90 years old. However, 121 (12%) LTMPs were unable to be identified with a specific DOB.

Reported age

The data collection process for the study involved utilising the reported age of LTMPs as listed on the NMPCC and the AMPR. In cases where the age was omitted from either of these sources, other online sources were consulted using a reliability precedence (Appendix V) order to determine the reported age. Out of the 1,043 LTMPs included in the study, 898 (86%) had a reported age (Appendix E) with ages ranging from infancy to 91 years old. The remaining 145 (14%) individuals failed to have a reported age.

Gender

The data collection process for this study included the identification of 1,043 LTMPs from various sources. Gender was determined by utilising information found on the designated source website(s). Three distinct gender identities were identified for analysis: male, female, and other. Of the 1,043 individuals included in the study, 1,043 had a known gender, with 703 (67%) identified as male, 339 (33%) as female, and 1 as other.

Ethnicity

The process of determining the ethnicity of LTMPs in this study involved utilising online sources, such as articles and family history, to identify specific ethnic information or infer ethnicity through various factors such as family name and reported missing location. The identified ethnicity was then matched against the categories listed in the 2016 Australian Standard Classification of Cultural and Ethnic Groups (ASCCEG) ancestry table.

In instances where ethnicity was unclear or listed in a broad, uninformative manner, additional information such as image, language of articles, and associations were considered to infer ethnicity. For example, if the LTMP's name or image suggested a certain ethnicity, and this was supported by other information such as reported missing location or cultural specific articles, this information was used to infer ethnicity.

The resulting ethnicity was then categorised in accordance with the ABS ASCCEG hierarchy, with a focus on the "Narrow" classification and the inclusion of a supplementary code for Caucasian. This was done to ensure that Indigenous Australians were categorised as Australian Peoples under the ABS hierarchical structure of "Narrow". This approach was adopted to separate LTMPs that were listed as Caucasian and as opposed to assuming that all Caucasians were Australians. This separate categorising, based on ABS terminology, ensured

that a clear distinction could be made between Indigenous Australians, Australians (Caucasian) and Caucasians where no ethnicity could be determined.

In cases where no additional information could be located that would provide details on the LTMP's ethnicity, the uninformative description was applied. For example, if the ethnicity was listed as "olive" or "dark" without any further information, it was matched to the ABS ASCCEG categorisation of "not further defined" (nfd) "ethnicity, nfd" for example, "North African and Middle East, nfd". And those LTMPs with an ethnicity of "olive, dark, brown or black, and no other information could be located to determine ethnicity, they were listed as "unknown", and excluded from analysis (Appendix F).

Of the 1,043 LTMPs included in the study, 886 (85%) had their ethnicity determined through this process. The resulting ethnicity classifications were categorised based on ABS ASCCEG, "Narrow", with a total of twenty classifications identified and applied directly to LTMPs in addition to Caucasian and Other.

In summary, the process of determining ethnicity of LTMPs in this study was a multi-step process that involved utilising online sources to identify specific ethnic information or inferred ethnicity through various factors such as family name, reported missing location, images, language of articles, and associations (community groups). The resulting ethnicity was then matched against the ABS ASCCEG classification (Appendix G), with a focus on the "Narrow" classification, and 886 (85%) out of the 1,043 LTMPs included in the study had their ethnicity determined through this process [92], [95]–[96].

4.8 Characteristics – Minor

Minor characteristics were excluded from analysis in this study. This data however was presented within the data collection chapter for information purposes that may be considered for future studies.

Date disappeared

The data collection process for determining the "date disappeared" in this study involved the application of two methods. The first method involved identifying the date listed as "date missing," "last seen," "reported missing," or similar terms, and utilising this date as the "date disappeared" if no conflicting dates were located. This method was applied by reviewing the "source website(s)" and other online sources to locate the "date disappeared" for all LTMPs in the study.

The second method involved determining the "date disappeared" as the date closest to the last known date of contact between the LTMP and their family, friends, work colleagues,

or any institution. This method was applied when multiple dates were located from multiple reliable sources, excluding a Coroner's report. The date closest to the last known date of contact was determined as the "date disappeared" in these cases.

In cases where only a month and year or year only were identified, the "date disappeared" was determined to be the first of that month and year or the first of January of the year, respectively. This was done to ensure consistency in the data collection process.

In instances where no "date disappeared" could be established, it was recorded as "unknown." This was done to ensure that all LTMPs were included in the study and to acknowledge that a definitive date of disappearance was undetermined in some cases.

A total of 1,043 LTMPs were included in the study, and 1,043 had a "date disappeared" recorded. Among these, 1,015 (97%) had an identified exact "date disappeared," 16 (2%) had only a month and year identified, and 12 (1%) had only a year identified (see Figure 4–4 below for a counts). This information was included to provide an overview of the LTMPs included in the study, and to acknowledge that the data collection process may have been influenced by the jurisdiction in which the person went missing.

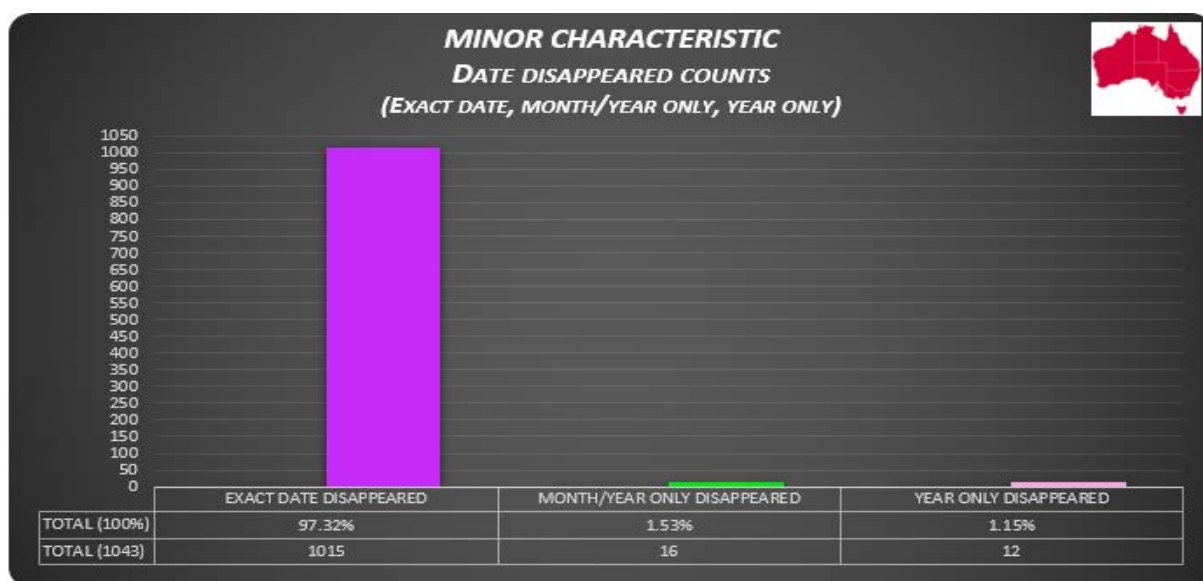


Figure 4–4 Disappeared date counts of LTMPs where exact, year only, month/year have been located and those unknown.

Day of the week disappeared

The data collection process for this study involved locating the exact date on which individuals were reported missing and determining the corresponding day of the week. A thorough review of existing literature revealed no prior research on which day of the week had the highest frequency of reported missing persons, particularly in the case of LTMPs.

To gather the data, the study analysed the dates of reported missing persons, specifically focusing on those cases classified as LTMPs. The data was analysed to determine the day of the week the individuals were first reported missing (see below in Figure 4–5 for a

breakdown of days of the week). The findings, indicate that Thursdays appear to have the highest prevalence of LTMPs, with a total of 170 (16%) cases. Conversely, Mondays appear to have the lowest frequency, with a total of 121 (12%) cases.

It is important to note that the data collected may be subject to inaccuracies due to issues with terminology and inconsistencies in the way missing persons are reported. As a result, the findings should be considered as preliminary observations only.

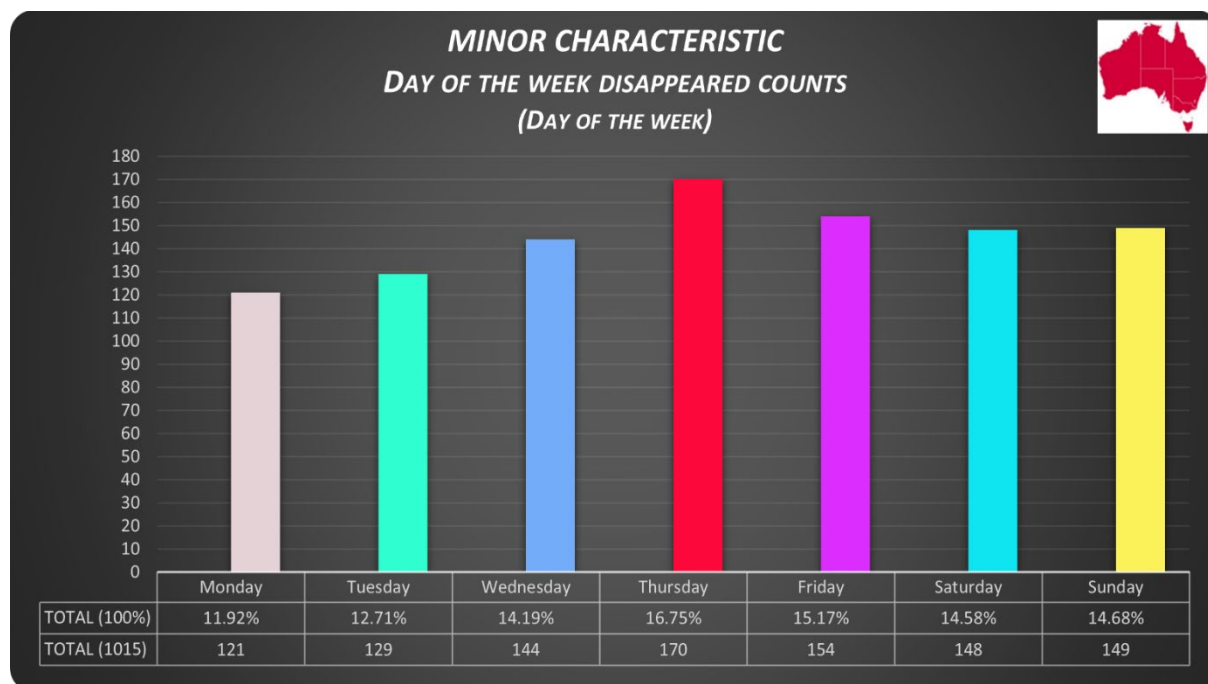


Figure 4–5 Totals of the days of the week when LTMPs were considered to have disappeared.

Month disappeared

The data collection process for the study on LTMPs involved utilising information on the month and year in which the individual was determined to have disappeared. The "month disappeared" was established by using the "date disappeared" information provided. In cases where only a "year disappeared" was available, the related month was excluded from the analysis. Of the 1,043 LTMPs included in the study, 1,031 (99%) had a recorded "month disappeared".

An analysis of the data revealed that January, 116 (11%) was the month in which the most LTMPs initially vanished. Conversely, February, 67 (6%) was the month with the least number of LTMPs who vanished. This discrepancy may be partially attributed to the reduced number of days in the month of February, including 28 days in a non-leap year and 29 days in a leap year. Additionally, of the 67 (6%) LTMPs who vanished in February, 23 (2%) disappeared during a leap year (see Figure 4–6 below for breakdown of counts).

It is worth noting that the terminology used to record the date of disappearance is open to interpretation and there is no standard for determining if the date missing refers to the date

last seen, the date considered missing, or the actual date of disappearance. The use of "month disappeared" in the analysis reduces the potential for errors in the results, as it is less specific than using the actual day of disappearance to determine the day of the week. Due to the potential issues with the data however, the results of this analysis should be considered preliminary observations only.



Figure 4-6 Totals of the months of the year when LTMPs were considered to have disappeared.

Year disappeared

The data collection process for this study involved identifying LTMPs, defined as individuals who have vanished and remain missing for an extended period of time. The "year disappeared" for each missing person was determined using the "date disappeared" (Appendix H) provided in available records. A total of 1,043 LTMPs were included in the study, all of whom had a recorded "year disappeared." The data was gathered up to and including May 19th, 2020.

To facilitate analysis, the years were grouped into ranges of five years, for example, 1920 to 1924. The year 2020 was listed as a singular date range. The data collected indicates that the greatest number of LTMPs were reported missing between 1995 and 1999 across Australia. It is important however, to note that between 1920 and 1944, only two LTMPs were identified. From 1945 to 1989, the number of LTMPs gradually increased across all jurisdictions. In the remaining years, 1990 to 2019, the counts for LTMPs and the year they vanished fluctuated within a maximum of $\pm 3\%$ (see Figure 4-7 for below breakdown of counts).

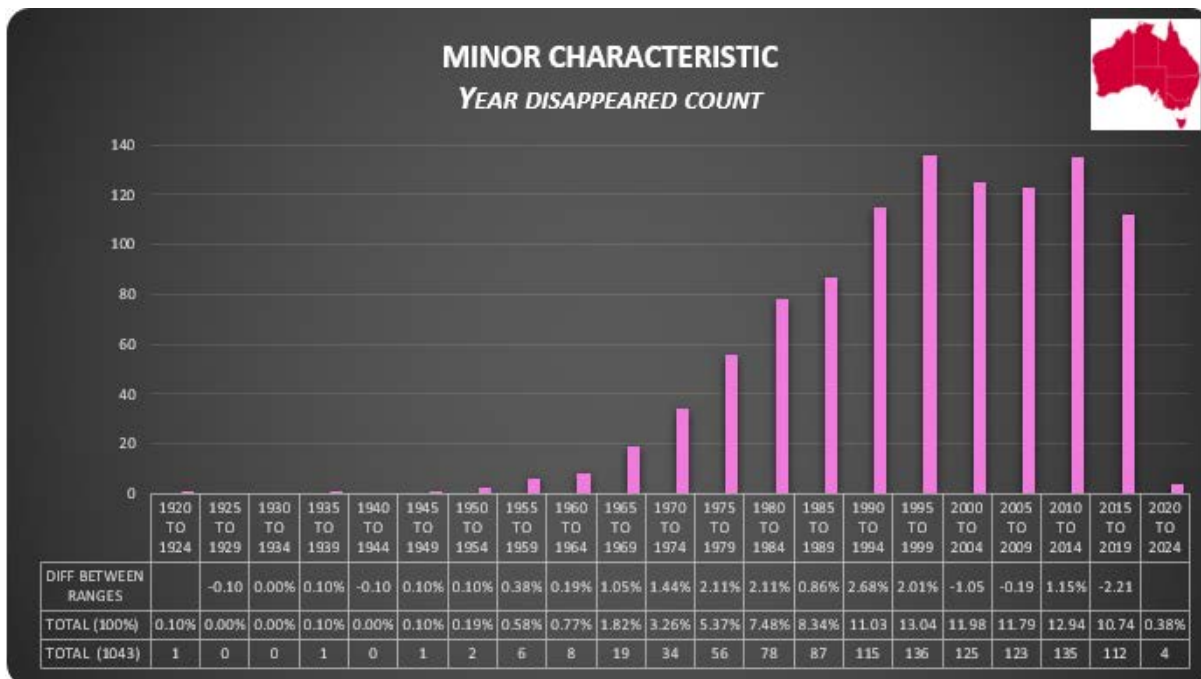


Figure 4–7 Year ranges of when LTMPs were considered to have disappeared.

The data collection process for this study involved a thorough examination of official records pertaining to missing persons in Australia. The records were analysed to determine the yearly counts of individuals who were profiled as missing and subsequently classified as LTMPs. The analysis revealed that the overall number of LTMPs in Australia reduced from 2015 to 2019. When the data was examined on a jurisdiction-by-jurisdiction basis however, this trend failed to be replicated. The number of LTMPs listed in each five-year range between 1920 and 2020 varied sporadically across jurisdictions (Appendix I to Appendix P).

When compared to the 2015 to 2019 range for Australia, which showed an overall decrease in LTMPs, the results revealed that, excluding NSW, all jurisdictions either remained static or decreased when compared to the 2010 to 2014 range. The largest decrease was observed in VIC with 11.76%, while the lowest reduction occurred in SA. Of all the jurisdictions, only NSW had an increase in the number of LTMPs, at 2.22%, for the period 2015 to 2019 (see Table 4–4 below which illustrates significant variations of LTMPs in each jurisdiction within a 5 year range, with a complete listing in Appendix Q).

It is important to note that the 2.22% increase in NSW and other minor characteristic findings in this study are based on preliminary observations only, due to the available data.

Table 4–4 Based on LTMP cases in each jurisdiction, the % increase or decrease when compared to the previous five years over a 10 year period.

| Separated by jurisdiction, the % difference of LTMP counts when compared to the previous five years 2010 to <2020 (Only) | | | | | | | | |
|--|------------|---|-----------|------------|-----------|-------------------------------------|------------|-----------|
| Decrease in % of LTMP cases between ranges | | Increase in % of LTMP cases between ranges | | | | No difference between ranges | | |
| Years | ACT | NSW | NT | QLD | SA | TAS | VIC | WA |
| 2010 – <2015 | 7.69 | -0.44 | -6.82 | 5.95 | 2.67 | | -0.98 | 3.85 |
| 2015 – <2020 | | 2.22 | | -8.33 | -2.67 | | -11.76 | -3.85 |

Month born and month disappeared

In the present study, data on the "month born" and "month disappeared" of 1,043 LTMPs was collected and analysed. The "month born" referred to the month in which the individual was determined to have been born, as determined by their exact DOB or, in instances where only a month and year were identified. Similarly, the "month disappeared" referred to the month in which the individual was found to have disappeared, as determined by their exact date of disappearance or instances where only a month and year were identified.

An examination of the collected data revealed that 51 LTMPs disappeared in the same month as their month of birth. Additionally, a review of nationally accepted holidays in Australia (as listed in Table 4–5) indicated that April has the highest number of consecutively occurring public holidays. This, combined with the findings that April also has the highest number of LTMPs who have a birthday in the same month that they go missing, as shown in Figure 4–8, suggests a possible correlation between the number of public holidays and the occurrence of missing persons. However, due to the limited number of occurrences and potential for data errors, no further examination of these results was conducted.

Table 4–5 Australian National Public Holidays [97].

| Australian National Public Holidays |
|--|
| New Year's Day |
| Australia Day |
| Good Friday |
| Easter Saturday |
| Easter Sunday |
| Easter Monday |
| ANZAC Day |
| Christmas Day |
| Boxing Day |



Figure 4–8 Matching birth month and disappeared month of LTMPs.

Coronial investigation

In this study, an effort was made to determine the prevalence of "coronial investigations" in cases of LTMPs. A total of 1,043 LTMPs cases were analysed, out of which 172 (16%) cases were found to have Coroner reports or findings. The data collection process involved searching for Coroner reports or findings in various jurisdictions, taking into account the variations in processes and reporting methods. It was determined that the differences between jurisdictions were insignificant for the purpose of this study.

For descriptive purposes, the terms "Inquest," "Record of Investigation," "Coroner's report," and "Coroner's finding" were considered interchangeable. The search for Coroner reports resulted in a further possible 140 (13%) LTMPs cases that had Coroner's reports, but these reports were unlocated through online searches. These cases were categorised into three groups: "No," "Yes," and "Possibly."

"No" indicates that no online documents were located to suggest that a Coroner had made findings in relation to a LTMPs case. "Yes" indicates that a Coroner had made findings in relation to a particular LTMPs case, and a copy of the Coroner's report had been located. "Possibly" (as seen below in Figure 4–9) indicates that one or more online documents suggested that a Coroner had made findings or had held an inquest into a particular LTMPs case, but no copy was found online. These documents may be accessible directly from the Coroner's Court or archives from the respective state or territory.

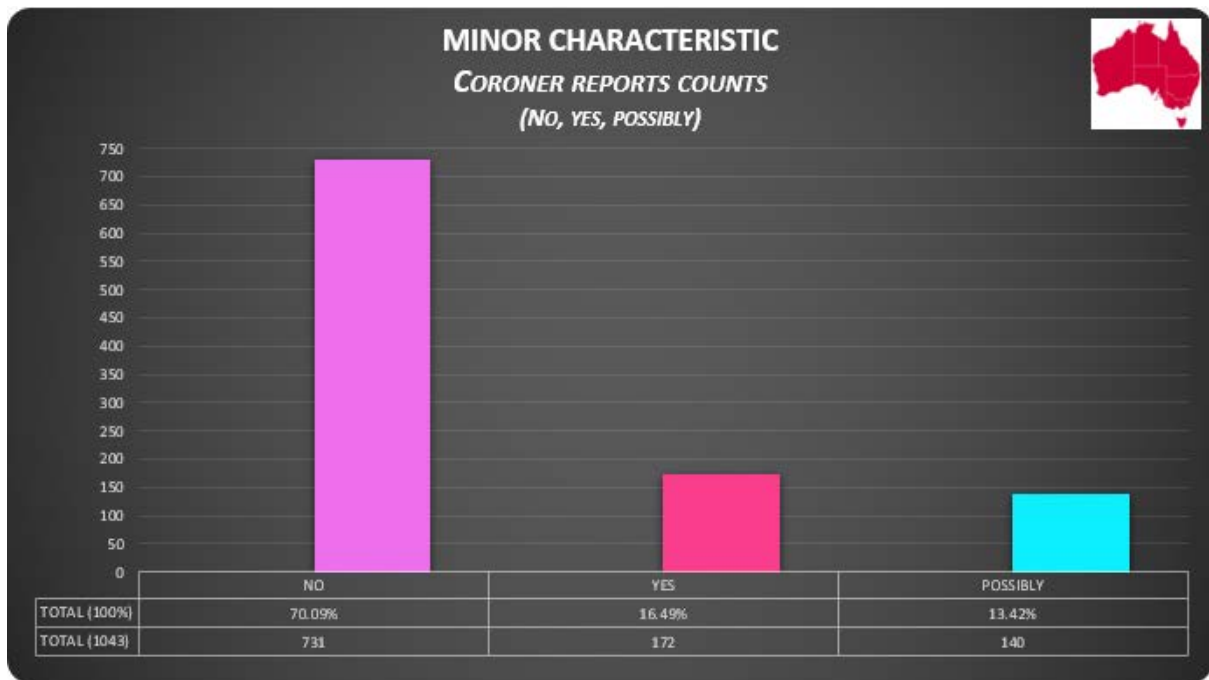


Figure 4-9 Counts of Coroner's reports on LTMPs.

4.9 Summary

This chapter presents an in-depth examination of the data collection process utilised in this study. The study's sample population was drawn from publicly available sources, from government and private websites. The data was collected and analysed to examine the major characteristics of jurisdiction, age, gender, and ethnicity, as well as minor characteristics that were identified as areas for future research.

To ensure the accuracy and reliability of the data, a thorough data cleaning process was implemented. . The cleaned data was then analysed using descriptive analysis.

It is important to note that, while the use of publicly available data offers a wealth of information for research purposes, it also presents certain limitations and issues for consideration. Despite these limitations, the utilisation of publicly available data in this study provided valuable insights into the characteristics of the sample population and their potential implications for future research.

CHAPTER 5

RESULTS

5.1 Introduction

The current study aims to examine the feasibility of using publicly available information to create a dataset of characteristics of LTMPs in Australia. Literature in the field of missing persons research has consistently identified the need for more research on this topic, particularly LTMPs. Additionally, previous studies have highlighted the difficulties in obtaining reliable data on missing persons from traditional sources such as law enforcement agencies and NGOs.

To address these gaps in knowledge and data availability, this study employed an alternate method of data collection by utilising publicly available information from online sources. A total of 1,043 LTMPs were identified from two primary sources, the NMPCC and the AMPR, as well as other relevant online sources. Excel spreadsheets were created to organise and follow cleaning analyse the data, which was used to generate counts of specific characteristics such as jurisdiction, age, gender, and ethnicity.

The study's focus is on creating a dataset that can be used to establish patterns and gain insight into the characteristics of LTMPs. The data collected from online sources was found to be almost complete in regard to jurisdiction, age, gender, and ethnicity, indicating that publicly available information can provide a viable option for data collection in this field. Further details on the data collection methods are provided in Chapter 3 and Chapter 4 of the thesis.

Descriptive analysis was used to analyse the data collected on these characteristics and enables the summarisation and presentation of data in a clear and concise manner. Descriptive analysis is a statistical method used to summarise and describe the main features of a dataset, including measures of central tendency (mean, median, and mode) and measures of variability (standard deviation, range, and interquartile range). This type of analysis involves summarising and describing the data, such as calculating frequencies and percentages, and can provide an overall understanding of the characteristics of LTMPs in Australia. In addition to the data collection, the study also employed descriptive analysis as a means of interpreting and understanding the data. In this study, descriptive analysis was used to summarise and describe

the calculated ages of LTMPs in Australia and compare them to the ABS average age for Australians.

This method was used to identify patterns, trends, and relationships in the data and to provide a clear understanding of the processes and protocols implemented by law enforcement agencies in Australia for missing persons cases. The results were then evaluated against similar data from ABS publicly accessible data and previous international studies [9], [31]. The final analysis provided an updated understanding of the age, gender, and ethnicity characteristics of LTMPs in Australia.

5.2 Australia – Major Characteristic (*Jurisdiction*)

Data collection for this study was conducted through a comprehensive examination of the processes and protocols implemented by law enforcement agencies across the eight jurisdictions of Australia for the prevention, detection, and investigation of missing persons cases. This included a description of the role and responsibilities of regional law enforcement agencies, as well as the AFP and the NMPCC. The data was obtained through various sources, including official reports and documents, media articles, and relevant literature. This document analysis was done to supplement available data and to check for data inconsistencies.

Figure 5–1 illustrates the eight Australian jurisdictions, including the ACT, NSW, NT, QLD, SA, TAS, VIC, and WA, with their respective law enforcement agencies responsible for missing persons cases.



Figure 5–1 All Australian jurisdictions.

In this study, the LTMPs dataset jurisdiction data belonging to 1,043 individuals was analysed. As no prior research on LTMPs in Australia or the individual jurisdictions could be located, a comparison was carried out between the ABS population of Australia and each jurisdiction as of June 30, 2020 [10] and the number of LTMPs in those same areas as of May 19, 2020 from the dataset. A significance level of 5% was applied to the results in the LTMPs sample when compared to the ABS ERP. Any variation over 5% was considered an anomaly.

To assist the reader, large numbers have been reduced using the following process. To collect the data, counts of ABS ERP provided by the ABS were used. For ABS ERP counts in each jurisdiction, the data was represented as an exponential number. If the data was greater than 1,000, a positive exponent of three was applied, i.e., $>1,000, n \times 10^3$ rounded to the nearest 100. Where figures were less than 1,000, a negative exponent of three was applied, i.e., $<1,000, n \times 10^{-3}$, with no rounding. The ABS ERP of Australia as of June 30, 2020 was 25,693,267, represented as 25,693.3. The ABS data was taken from the ABS data cubes mean [90] as opposed to the median age of 37.7 [98].

Upon analysing the LMTP dataset, the results indicated that nearly half of all LTMPs had been reported to NSW law enforcement agencies. NSW LTMPs were higher by approximately 11% while VIC was lower by more than 16%. This percentage difference suggested that NSW had more LTMPs per capita than any other jurisdiction, while VIC had the lowest number of LTMPs per capita when compared to all other jurisdictions. NSW had over 25% more LTMPs cases than any other jurisdiction. VIC had the second highest ABS ERP at more than 25% of the total population, however, had less than 10% of the LTMPs cases. VIC appeared to be the most inconsistent of all the jurisdictions when comparing ABS ERP and LTMPs. All jurisdictions except for VIC appeared to support the possibility of a correlation between ABS ERP counts and LTMP counts.

Furthermore, Figure 5–2 illustrates the remaining six jurisdictions, which decreased relatively evenly, with ACT having the lowest number of reported LTMPs. An additional investigation was carried out by comparing the ABS ERP data on the Australian population as of June 2020 with LTMPs jurisdictional counts. The ABS ERP data was analysed using the exponential number. Of the eight jurisdictions, six of the judications varied by less than 5%, i.e., QLD, WA, SA, TAS, ACT and NT with two having a difference of less than 1%, SA and ACT. These low differences may indicate a correlation between jurisdictional population and the number of LTMPs in that jurisdiction. Figure 5–3 illustrates the remaining two jurisdictions, which had a difference greater than $\pm 10\%$, NSW and VIC.

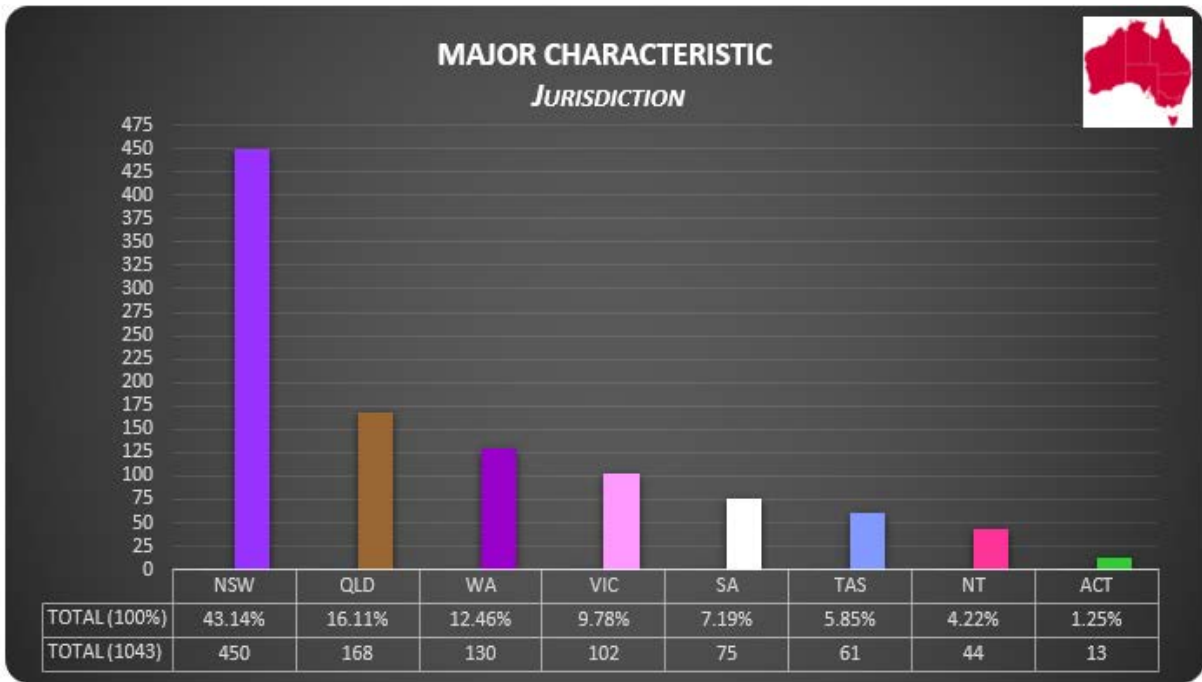


Figure 5–2 Long-term missing person counts for all Australian jurisdictions.

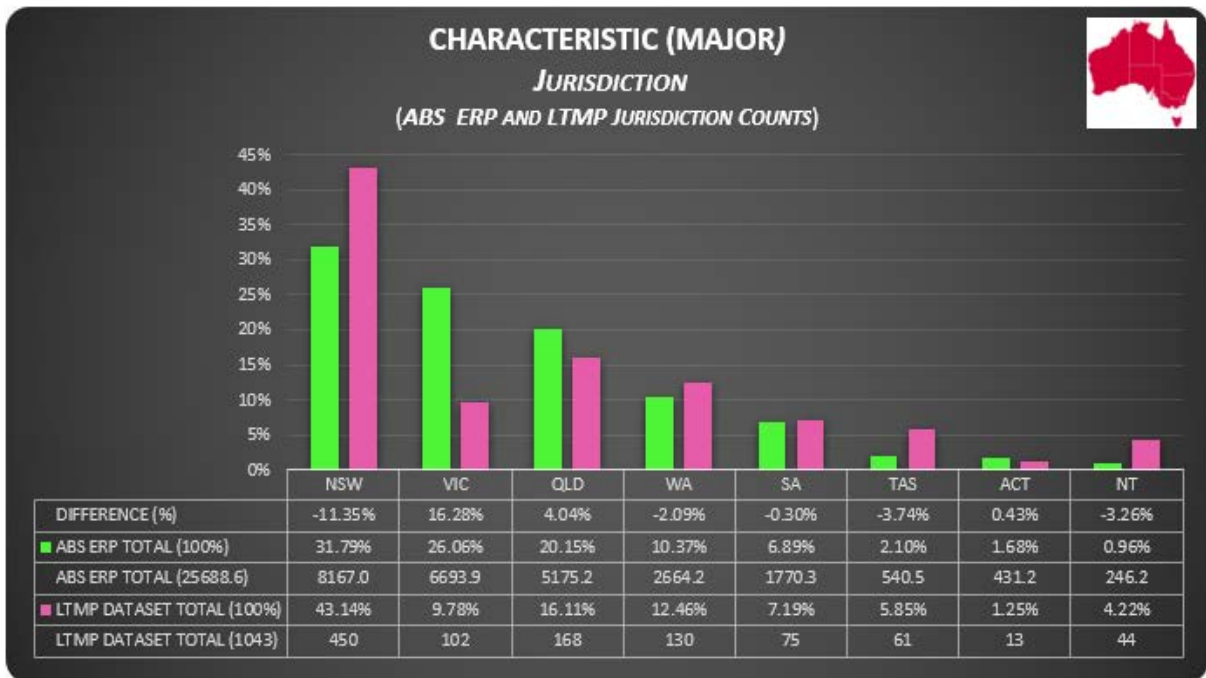


Figure 5–3 Comparison of ABS ERP counts and LTMP counts for all Australian jurisdictions.

The results of the analysis revealed that there were disproportionate variations between jurisdiction population counts and LTMPs counts in NSW and VIC when compared to all other jurisdictions. Excluding Vic, accepting that $\pm 5\%$ variance, it is suggested that there may be a correlation between population counts and the number of LTMPs within a jurisdiction.

The exception, VIC, which has the second highest ABS ERP, appeared to be an outlier. This suggests that further investigation is needed to understand the reasons for this difference. VIC was the only jurisdiction with the lowest LTMPs per capita. Therefore,

excluding VIC from the analysis resulted in the suggestion that a maximum estimate of reported LTMPs in any Australian jurisdiction could be determined by calculating $\pm 5\%$ of the ABS ERP for the same jurisdiction.

When comparing the order of jurisdictions based on the ABS ERP and the number of LTMPs, only three jurisdictions (NSW, SA, and TAS) correlated to the ABS ERP order of highest to lowest jurisdiction populations. The remaining five jurisdictions (VIC, QLD, WA, ACT, and NT) appeared in an alternate order. The jurisdiction order based on the ABS ERP with the associated LTMPs changed when determining the order of the jurisdictions, with the most to the least number of LTMPs, based on the percentile of ABS ERP to LTMPs.

The order of the jurisdictions based on the percentages of LTMPs to ABS ERP shifted the following jurisdictions: NSW (remained static), QLD, WA, VIC, SA (remained static), TAS (remained static), NT and ACT. This indicated a different ratio of LTMPs than that of the ERP, however, these jurisdictions, excluding VIC, were within the acceptable $\pm 5\%$ variance. Three jurisdictions (QLD, WA, and NT) shifted up incrementally by one, suggesting that these jurisdictions had a higher number of LTMPs per capita. The ACT dropped by one increment, suggesting that it had a lower number of LTMPs per capita. VIC dropped by two incremental points, identifying it as having the largest shift in position of any of the jurisdictions. The cause of this shift was unable to be determined from the current available data and is beyond the scope of the study (see Figure 5–3 above and 5–4 below for a breakdown).

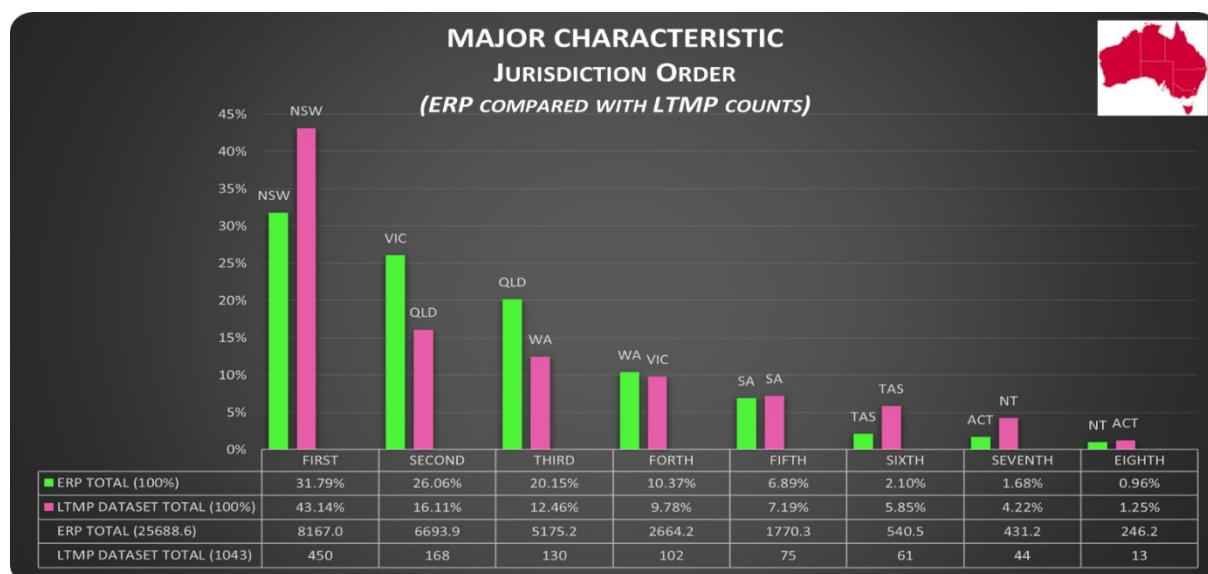


Figure 5–4 Proportional comparison between ABS ERP and LTMP to determine the jurisdictional order from highest to lowest.

The final analysis conducted in this study involved comparing the number of LTMPs across various jurisdictions with the population of those jurisdictions. A ratio of LTMPs to population was calculated and analysed. The results indicated a lack of correlation between population size and the number of LTMPs. It is worth noting that the total number of LTMPs, approximately 2,600, was unavailable at the time of the analysis. Had this data been included,

it is possible that the results may have shown a stronger correlation between the percentage of LTMPs and the ABS ERP.

An interesting observation however was made regarding the significant drop in the number of LTMPs in VIC compared to all other jurisdictions. Despite the limitations of the data, the large drop in LTMPs per population, as shown in Table 5–1, suggests that VIC may have an unusually low number of LTMPs when compared to other jurisdictions. The use of descriptive analysis allowed for the identification of this trend and provided a deeper understanding of the data.

Table 5–1 Ratio of LTMP to jurisdiction population (1:n, n^1000) from lowest to highest.

| Jurisdiction | LTMP count | ERP | LTMP per ERP | ERP Figure 5–4 | LTMP Figure 5–4 |
|--------------|------------|---------|--------------|----------------|-----------------|
| VIC | 102 | 6,693.9 | 1:65.6 | Second | Fourth |
| ACT | 13 | 431.2 | 1:33.2 | Seventh | Eighth |
| QLD | 168 | 5,175.2 | 1:30.8 | Third | Second |
| SA | 75 | 1,770.3 | 1:23.6 | Fifth | Fifth |
| WA | 130 | 2,664.2 | 1:20.5 | Fourth | Third |
| NSW | 450 | 8,167.0 | 1:18.1 | First | First |
| TAS | 61 | 540.5 | 1:8.9 | Sixth | Sixth |
| NT | 44 | 246.2 | 1:5.6 | Eighth | Seventh |

5.3 Australia – Major Characteristic (*Age Disappeared*)

In terms of age ranges, Newiss (2005) identified that the most prevalent age range for missing persons in the UK is 30 to 40 years old, based on data from the Metropolitan Police. Similarly, Cohen, McCormick, and Plecas (2007) and Sekela, Plecas, and Cohen (2010) found that the age range for missing persons in Canada is also within the 30 to 40 years old range. Bricknell (2016), an Australian researcher, found that individuals who fail to be found are generally middle-aged to older adults, based on data from QLD law enforcement.

To further clarify the age range of middle-aged individuals, this study references the ABS classification standards for age ranges and associated terms (see Table 5–2 below for an explanation of age ranges). The ABS defines middle adulthood as individuals between the ages of 25 to 44 years old. In this study, the term "middle-aged" has been paralleled with the ABS term "middle adulthood" within the age range of 25 to 44 years old. Furthermore, descriptive analysis was used to analyse the data and identify patterns and trends in the age ranges of missing persons in Australia.

Table 5–2 ABS age ranges and associated terminology.

| ABS age ranges and terminologies | | |
|---|---------------------------------------|------------------------|
| Age range | ABS classification [76] | Associated term |
| Under 1 | Infancy | N/A |
| 1 to 14 | Young | N/A |
| 15 to 24 | Young adulthood | N/A |
| 25 to 44 | Middle adulthood | Middle aged [39] |
| 45 to 64 | Older adulthood to average retirement | Older adults [39] |
| 65 and older | Retirement | N/A |

In this study, the age range of individuals who have been classified as LTMPs were defined in accordance with ABS groupings and terms. According to ABS, older adults are defined as those in the age range of 45 to 64 [76]. Other age ranges, (as depicted in Table 5–2), were also described by ABS and include those under 1 (infancy), 1 to 14 (young), 15 to 24 (young adulthood), and ≥ 65 (retirement) [76]. By using these age range definitions, the study aims to develop targeted services to minimise the risk of LTMPs and prevent their disappearance altogether.

Furthermore, by applying ABS age range definitions to the results of Bricknell’s study [38] on unlocated people in the QLD jurisdiction, it appears that the average age of LTMPs has remained relatively unchanged since Newiss’ 2005 study [31]. Additionally, a comparison of age ranges of LTMPs in studies conducted in Australia, UK, and Canada suggests that location may have little impact on determining who may become a LTMP, as opposed to specific high-risk locations within individual jurisdictions.

The age and age range of LTMPs were analysed by comparing the number of LTMPs where an age had been identified, and the number of LTMPs where an age was calculated using a located exact birth date or partial DOB. A partial DOB was considered as a birth date where a month and year or only a year was found, and where the partial birth date varied from the reported age by one year. In cases where only a month and year were found, the birth date was determined to be the first of that month. For instance, if the month and year found was May 2020, the DOB would be considered as 1st May 2020. Similarly, if only a birth year was located, the birth date was determined to be 1st January of that year.

The data collection process for this study involved identifying LTMPs with no reported birth date and age. A total of 121 (12%) individuals were identified as missing persons with no birth date, and 145 (14%) individuals were identified as missing persons with no reported age. In cases where no birth date or reported age could be identified, the age was recorded as unknown and excluded from any age-related analysis.

To create an age estimate for those missing persons with no birth date, a calculated age was determined based on available information. This resulted in 129 (12%) missing persons with a calculated age that had a one-year or less difference from their reported age. Additionally, of the 495 (47%) missing persons with an exact birth date, 90 (7%) had a calculated age that differed from their reported age. The range of difference between calculated ages and reported ages for these 90 (7%) individuals was from under one year old to 37 years old.

The overall difference between calculated ages and reported ages for all LTMPs was found to be an insignificant variance of 10.0004 years, or 0.04% of the total years difference between calculated ages and reported ages. This insignificant variance is illustrated in Figure 5–5. Additionally, there were 24 (2%) more missing persons with an identified birth date than those with a reported age, which determined that using the calculated age variable for analysis would increase the probability of identifying age ranges of those at higher risk of becoming LTMPs.

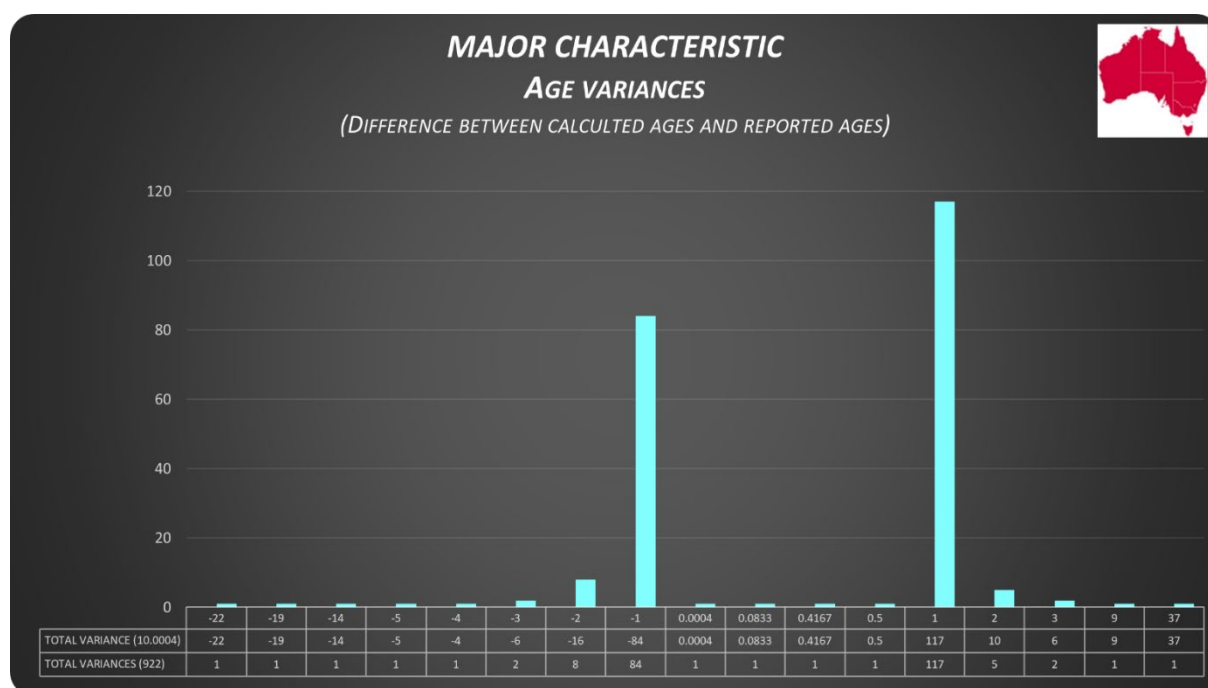


Figure 5–5 Calculated variance between calculated age and reported age where there is a discrepancy in age.

The data collection process for the LTMPs dataset involved sourcing information on calculated ages generated from exact and partial birth dates from online sources. The predetermined ages were then analysed and compared to the ABS average age for Australians as of June 30, 2022, to identify the age ranges and ABS classified age groups that were most at risk of becoming LTMPs.

The average calculated age of LTMPs in Australia was 37.13 years (37 years 1.56 months), while the ABS data indicated an average ABS ERP age of 39.32 years (39 years 3.84

months). The difference between the calculated and ABS ERP average ages was 2.19 years (2 years 2.28 months). This result was consistent with the age range of 35 to 40 years old and the ABS ERP term of "Middle Adulthood" (25 to 44), as reported in previous studies by Newiss (2005) [31], Cohen, McCormick, and Plecas (2008) [32], Sekela, Plecas, and Cohen (2010) [9], and Bricknell and Renshaw (2016) [39].

In Bricknell and Renshaw's study [39], the age range was described as "middle aged to older adults" with the most accurate description being "middle aged." As no specific age range was provided, the ABS categories were used as a guide, and the term "Middle Adulthood" (25 to 44) was selected to cover the suggested age range. The average age of 37.15 years found in this research (as shown below in Figure 5–6) falls within the average age range identified in previous studies.

Descriptive analysis was used to analyse the calculated ages of LTMPs and compare them to the ABS average age for Australians. The results of the descriptive analysis were used to identify the age ranges and ABS classified age groups that were most at risk of becoming LTMPs. The mean, median, and mode were calculated to determine the central tendency of the calculated ages of LTMPs. The mean age was 37.13 years (37 years 1.56 months), and the median age was found to be 37.13 years (37 years 1.56 months).

Measures of variability were also calculated to describe the spread of the calculated ages of LTMPs. The standard deviation was calculated to describe the average deviation of the ages from the mean, and the range was calculated to describe the difference between the lowest and highest ages. The interquartile range was calculated to describe the spread of the middle 50% of the data. The results of the descriptive analysis provided a comprehensive summary of the calculated ages of LTMPs and allowed for a comparison with the ABS average age for Australians.

The results of the descriptive analysis were then used to identify the age ranges and ABS classified age groups that were most at risk of becoming LTMPs. This information is valuable in the development of targeted prevention strategies aimed at reducing the incidence of LTMPs in Australia.

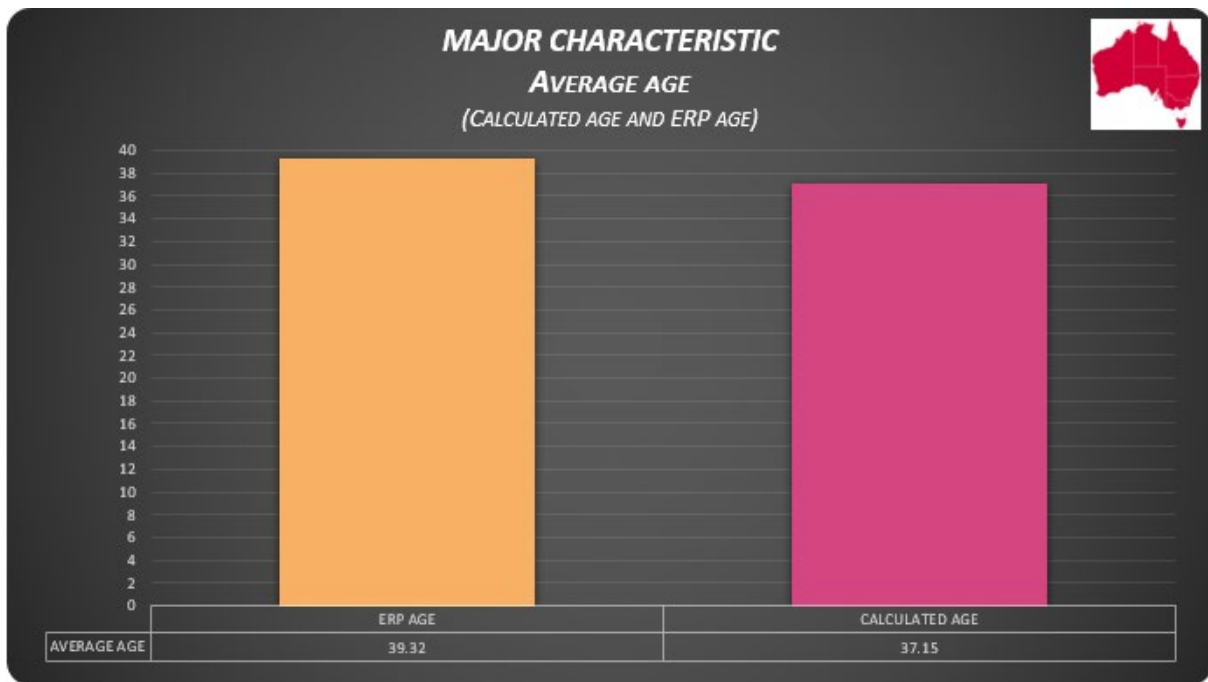


Figure 5–6 Comparison of ABS ERP average and LTMP average for all Australian jurisdictions.

5.4 Australia – Major Characteristic (*Gender*)

The study selected gender as a major characteristic in the analysis of LTMPs in Australia, in line with previous research on the topic. The data collection process identified three genders: male, female, and other. All LTMPs in the dataset had a gender listed. However, only one person had a listed gender other than male or female, which was recorded as "other."

According to ABS population data as of June 30, 2020, only results on the number of individuals who identify as male or female were provided [99]. Furthermore, ABS data pertaining to gender from 2016 also only listed two categories, male and female [90]–[100]. As a result, no analysis on genders other than male and female could be included in the results.

The LTMP dataset consisted of a total of 1,043 individuals. Of these, 703 (67%) identified as male, 339 (33%) as female, and 1 as other (see Figure 5–7 below for breakdown). Males represented 67.4% of all LTMPs, a 34.9% higher proportion than females (32.5%). One individual identifying as "other" contributed 0.1% to the total number of LTMPs.

Due to the limited number of LTMPs with an alternative gender, any further analysis would fail to be informative. It is important however, to acknowledge that a LTMP with an alternative gender was identified in the sample. Based on the data, the ratio of females to males among LTMPs was approximately 1:2.

It is important to note that in the data collection process, descriptive analysis was used to understand the characteristics of the LTMPs, specifically gender. This was done by identifying the proportion of individuals that identified as male, female, and other among the total population of LTMPs (see below Figure 5–7 of gender breakdown).

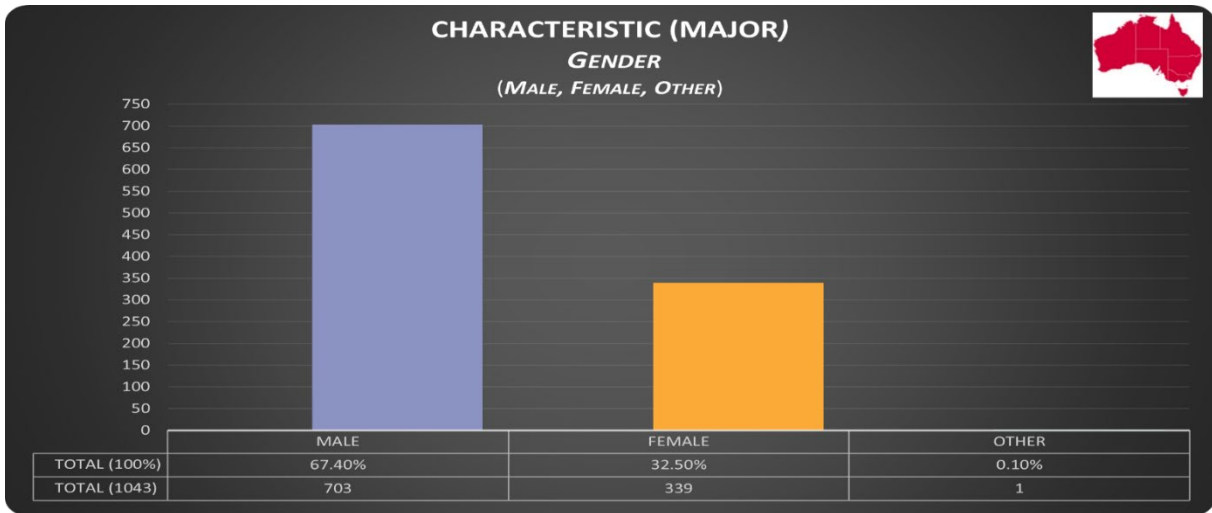


Figure 5–7 Gender counts.

The data collection process for this study involved utilising the ABS ERP data. This data provides information on the demographic characteristics of the Australian population, including the gender distribution. Analysis of the ABS ERP data revealed that the total ABS ERP is 25,693.3, with 12,732.9 (49.56%) being male and 12,960.3 (50.44%) being female. This results in a slight disparity between the number of males and females, with females being higher by 227.4 (0.89%) (as seen in the below Figure 5–8).

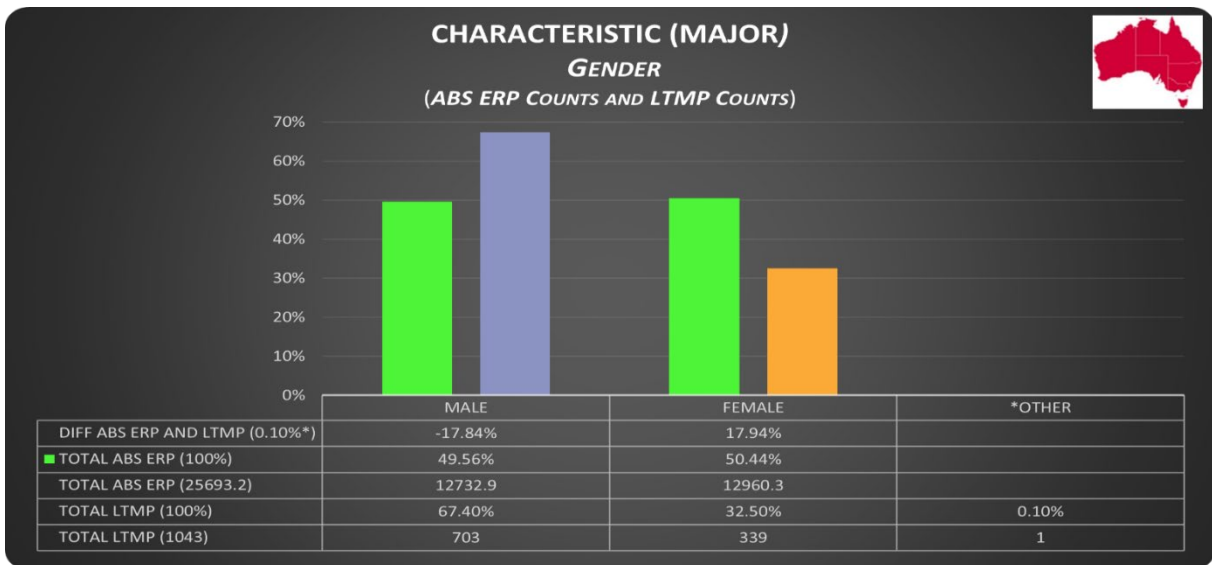


Figure 5–8 ABS ERP and LTMP gender count comparisons.

A descriptive analysis was conducted to examine the gender distribution within the population of LTMPs. The data revealed that the ratio of females to males among LTMPs is 1:2, which is disproportionate to the overall population ratio of 1:1. Specifically, over two thirds of LTMPs are male, while females represent less than one third of the total.

It is important to note that the small variation of 4.7 between the number of males and females in the overall population (as seen in ABS ERP counts) had no significant impact on

the results of this study and thus, no adjustments were made to the ABS ERP counts. Overall, the ABS ERP data suggests that the distribution of males and females in the Australian population is relatively equal, however this balance fails to be reflected in the gender split of LTMPs.

Descriptive analysis was used to examine the gender distribution of LTMPs in relation to the general population. This method of analysis involves summarising and describing the characteristics of a given dataset, in this case, the gender of LTMPs. The goal of descriptive analysis is to gain a deeper understanding of the data through the use of various statistical techniques.

In this study, descriptive statistics such as frequencies and percentages were used to summarise the data. Frequencies were calculated for the number of LTMPs by gender and were then compared to the ABS ERP data for the general population. The percentages were calculated to provide a proportion of the total number of LTMPs for each gender. This allowed for an easy comparison of the gender distribution of LTMPs with the general population.

In addition to frequencies and percentages, graphical representation was also used as a part of the descriptive analysis. Figure 1 illustrates the proportion of males and females among LTMPs and the general population, providing a clear visual representation of the data. This helped to clearly demonstrate the disproportionate split of LTMPs in relation to the general population by gender.

Furthermore, descriptive analysis allowed for the identification of patterns and trends in the data. The results of this study showed that males constitute 67.4% of all LTMPs, while females make up 32.5%. This pattern of a higher proportion of males among LTMPs is consistent with previous research on the topic.

Overall, the use of descriptive analysis in this study provided an informative understanding of the gender distribution of LTMPs and its relation to the general population. It allowed for the identification of patterns and trends in the data and provided a clear visual representation of the results, which helped to support the findings of the study.

5.5 Australia – Major Characteristic (*Ethnicity*)

The final characteristic analysed in this study was "Ethnicity". Previous studies on generic missing persons in Australia, such as James, Anderson, and Putt (2008) and Bricknell and Renshaw (2016), provided limited information in relation to Indigenous Australians. In the study by James, Anderson, and Putt, it was stated that information requested by the Australian Institute of Criminology could only be provided for the period 2005 to 2006, as opposed to the study period 1998 to 2006. The data was collected from each police jurisdiction, Salvation

Army Family Tracing Services, and Australian Red Cross Tracing Service. However, the authors noted that obtaining data on missing persons was problematic, as each state and territory maintained separate software systems, resulting in ethnicity details for some jurisdictions being excluded from missing person records. Additionally, records on missing persons appear to only be kept for a period of two years once a case is finalised.

In light of these issues, the study by Newiss (2005) was referenced, which looked at the characteristics of outstanding missing persons across the UK. This study revealed that those from minority ethnic groups were overrepresented among the outstanding missing person population. Furthermore, the studies by Cohen, McCormick, and Plecas (2008) and Sekela, Plecas, and Cohen (2010) also found that ethnic minority groups, specifically First Nations people of Canada, remained unlocated disproportionately to that of Caucasians based on census counts.

Bricknell and Renshaw's (2016) study also provided limited information on the ethnicity of missing persons or those considered to be LTMPs. This study included only persons with an Indigenous status and highlighted concerns around data quality and data integrity. Only half of the eight Australian jurisdictions were able to provide some details on those recorded as having an Indigenous status.

For this study, the term ethnicity was applied as defined by the ABS. ABS broadly defines ethnicity to cover a human population with commonalities of distinguishing features such as language, ancestry, and who have a recognisable and identifiable culture. The ethnicity groups were chosen based on the same categories as listed on ABS and the analysis was carried out using descriptive analysis to examine the proportion of missing persons in different ethnic groups. The results of this analysis were presented using tables and figures (see Figure 5–9 below for breakdown) and were used to gain a better understanding of the characteristics of LTMPs in terms of their ethnicity.

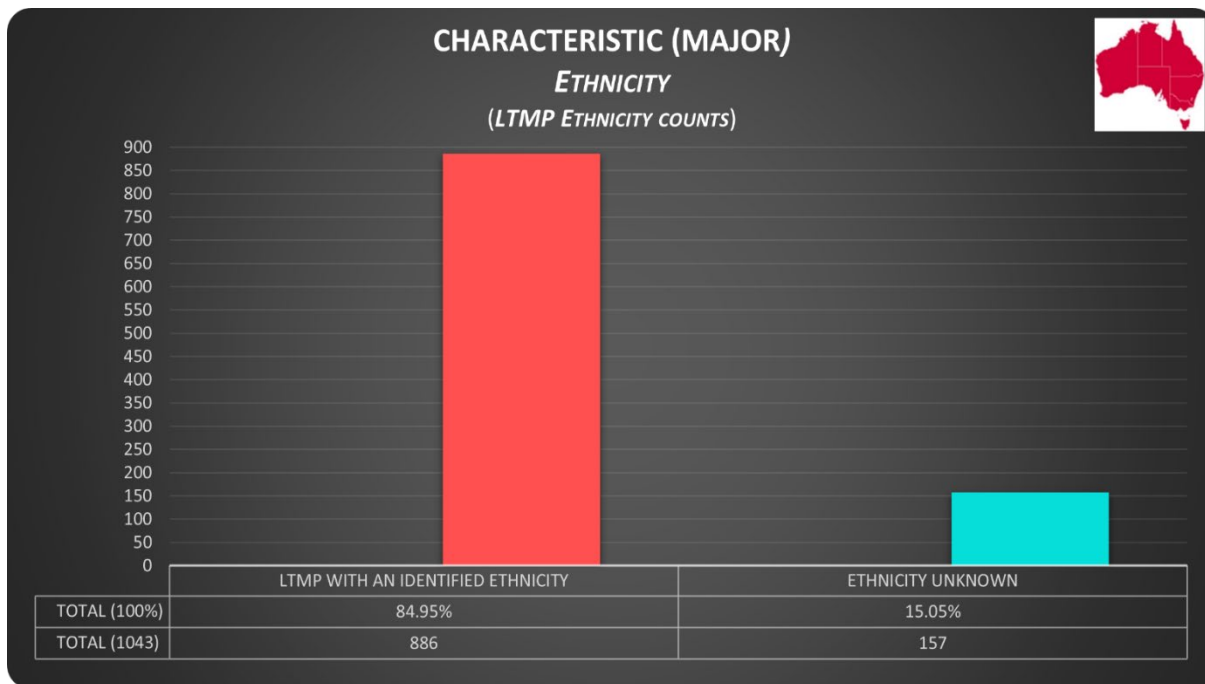


Figure 5–9 LTMP gender counts.

In order to analyse the ethnicities of LTMPs, a sample of 886 individuals with identified ethnicities was collected and divided into two groups: Caucasian (659 (63%) individuals) and "Other" (227 (22%) individuals). The "Other" group included a total of 36 specific ethnicities, as listed under the ABS grouping of "Narrow" [95]–[96], [101]. Additionally, there were 20 "Narrow" categories with three or more LTMPs considered to be of a specific ethnicity or broader capturing ethnicity description [95]–[96], [102].

To accurately allocate the distribution of LTMPs to their respective ethnicities, a two-step process was applied. The first approach utilised any clear description found in the documentation relating to a particular individual that fit the ABS "Narrow" category. In instances where no obvious ethnicity could be located, but some ethnicity description was initially identified, a second approach was applied. This approach required extensive investigation and focused on a number of key points, such as place of birth, image, ancestry information, name, groups, and awards, to determine a LTMP's ethnicity. These key points were applied in unison to satisfactorily establish a person's ethnicity and required more than one key point to be established before ethnicity would be inferred.

In instances where individuals were listed as Caucasian, the two-step process was also applied. Where possible, a specific ethnicity was attempted to be located. Caucasian was only applied in the following circumstances: if no ethnicity could be located, yet documents on that individual identified them as Caucasian or documentation listed the individual as white, fair, or other similar descriptions about their appearance or if listed as Australian.

The data collected was then subject to descriptive analysis to understand the distribution and characteristics of the sample. The results of this analysis were presented in Table 1, which shows the distribution of LTMPs by ethnicity.

In this study, data was collected on LTMPs in order to examine the representation of different ethnicities among this population. A total of 886 (85%) LTMPs with an identified ethnicity were analysed. Of those, 659 (64%) were identified as Caucasian, while the remaining 227 (22%) were categorised under the ABS ASCCEG "Narrow" description (Appendix R) [95]–[96], [101].

To contextualise this data, a comparison was done using the data cube of “Cultural Diversity counts for Ancestry by State and Territory of Usual Residence” as provided by ABS, dated 30 June 2016. This data included ethnicities that no LTMPs were specifically identified as [95]–[96], [102]. A comparison was only carried out on the ABS Ethnicity counts for which one or more LTMPs had been categorised as.

From the total number of Ethnicities listed under the Cultural Diversity, 46 individual Ethnicities were identified, including "British, nfd" [95]–[95], [102]. Of those 46, only 16 had ≥ 3 LTMPs belonging to a specific ethnicity. The approach provided an ABS Cultural Diversity population count totalling 9,725.17, including 1,857.64 for those included in "Other."

Descriptive analysis was used to examine the data. Due to the factors associated with ABS data collection on ethnicity, such as self-reporting and cross-cultural diversity, as well as potential errors when categorising a LTMP's ethnicity, two separate totals of ABS ASCCEG ethnicity populations were calculated. These two ABS ASCCEG ethnicity counts were then analysed and compared to LTMP counts and then against "Expanded ethnicities" and "Exact ethnicities" [95]–[96], [102], to determine any substantive differences or similarities in relation to over and/or under representation of ethnicities of LTMPs.

"Expanded ethnicities" [95]–[96], [102] expanded the ABS ASCCEG specific ethnicity counts to include “not elsewhere classified” (nec), nfd, and other possible LTMP ethnicities e.g., Chinese count expanded to include "Chinese Asian, nec", "Chinese Asian, nfd", "North-East Asian, nfd", "Other North-East Asian, nec,", "Other North-East Asian, nfd", "Sri Lankan" count expanded to include "Burgher", "Sinhales", "Sri Lankan Tamil", "Tamil, nfd" [95]–[96], [102]–[103]. This expansion of ABS ASCCEG counts was applied to all ethnicities including the ethnicities grouped into Other. The expanded number of ethnicities groups contributing to the expanded ABS ASCCEG total 153. The combined total of the ABS ASCCEG ethnicities expanded the population count to 18,383.34, with 2,719.19 belonging to the ethnicity of "Other" [95]–[96], [102]–[103].

The data collection process for this study involved identifying the ABS ASCCEG ethnicities of LTMPs and comparing them to the ABS ASCCEG ethnicities of the general

population. Specifically, "Exact ethnicities" were defined as those ABS ASCCEG ethnicities that matched the ethnicities of LTMPs exactly [95]–[96], [102]–[103]. This included both specific and generalised ethnicities, as well as those that were grouped into the category of "Other." The difference in population size between the ABS ASCCEG "Expanded ethnicities" and "Exact ethnicities" was 8,658.13 [103] (Appendix S). The ethnicity that contributed most to this difference was the inclusion of Australian in the Caucasian category, with "Other" having the next highest increase at 861.55. It was found however, that broadening the ABS ASCCEG ethnicity population scope had little impact on the overall proportional results in determining which ethnic groups of LTMPs were over or underrepresented [95]–[96], [102]–[103].

Descriptive analysis was used to analyse the data by applying a $\pm 5\%$ variance to both the "Expanded ethnicities" and "Exact ethnicities." This allowed for a scope of acceptable difference to be established (shown in the below Figure 5–9 and Table 5–3, and detailed Appendix T). It was found that 17 out of the 22 ethnic categories fell within this range. The remaining five had a variance of over 5%, with "Australian Peoples, nfd" and "Caucasian," so described appearing overrepresented, while Chinese, Irish and Other were identified as underrepresented. Similar results were seen when using the $\pm 5\%$ variance on "Exact ethnicities," however, German, Indian, and Italian exceeded the 5% variance yet still remained underrepresented. Only two ethnicities swapped from their representation position when evaluated using "Expanded ethnicities" and "Exact ethnicities", American changed to underrepresented and New Zealand Peoples, nfd shifted to overrepresented, in each case both ethnicities remained under 1% variance. The results pertaining to the representation of Caucasian seem to correspond generally to the studies of Newiss (2005) [31], Cohen, McCormick, and Plecas 2008 [32] and Sekela, Plecas, and Cohen 2010 [9] while the overrepresentation of Indigenous mirrored that of the two Canadian studies.

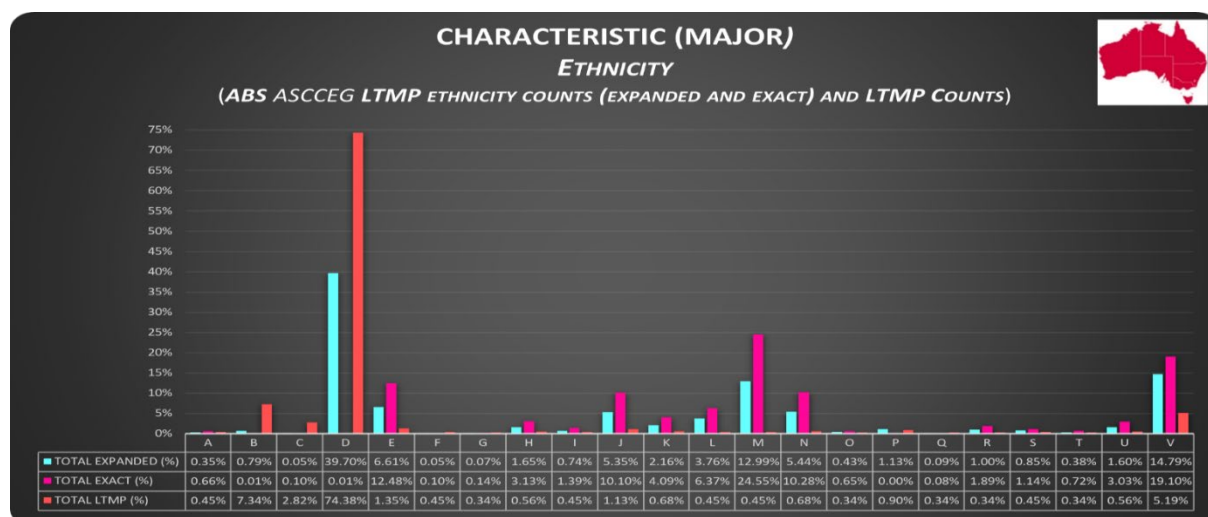


Figure 5–10 Comparison of “Expanded ethnicities” and “Exact ethnicities” identifying overrepresented and underrepresented. Ethnicities of LTMPs.

Table 5-3 Detailed list of ethnicities.

| Overrepresented % by >5% | | | | Underrepresented % by <5% | | | | Changed represented status | | | |
|--------------------------|---------------------------------------|-------------|-------|-------------------------------|-------|----------------------------|-------|-------------------------------|---------|----------------------------|---------|
| | | LTMP totals | | ASCCEG "Expanded ethnicities" | | ASCCEG "Exact ethnicities" | | ASCCEG "Expanded ethnicities" | | ASCCEG "Exact ethnicities" | |
| Ref | Ethnicity | 886 | % | 18,383.84 | % | 9,725.71 | % | Over % | Under % | Over % | Under % |
| A | American | 4 | 0.45 | 63.97 | 0.35 | 63.97 | 0.66 | 0.10 | | | 0.21 |
| B | Australian Peoples, nfd | 65 | 7.34 | 144.90 | 0.79 | 0.73 | 0.01 | 6.55 | | 7.33 | |
| C | British, nfd | 25 | 2.82 | 9.93 | 0.05 | 9.39 | 0.10 | 2.77 | | 2.73 | |
| D | Caucasian, so described | 659 | 74.38 | 7,298.84 | 39.70 | 0.60 | 0.01 | 34.68 | | 74.37 | |
| E | Chinese | 12 | 1.35 | 1,214.44 | 6.61 | 1213.9 | 12.48 | | 5.25 | | 11.13 |
| F | Eastern European, nfd | 4 | 0.45 | 9.90 | 0.05 | 9.33 | 0.10 | 0.40 | | 0.36 | |
| G | Fijian Indian | 3 | 0.34 | 13.51 | 0.07 | 13.51 | 0.14 | 0.27 | | 0.20 | |
| H | Filipino | 5 | 0.56 | 304.02 | 1.65 | 304.02 | 3.13 | | 1.09 | | 2.56 |
| I | French | 4 | 0.45 | 135.38 | 0.74 | 135.38 | 1.39 | | 0.28 | | 0.94 |
| J | German | 10 | 1.13 | 982.80 | 5.35 | 982.23 | 10.10 | | 4.22 | | 8.97 |
| K | Greek | 6 | 0.68 | 397.43 | 2.16 | 397.43 | 4.09 | | 1.48 | | 3.41 |
| L | Indian | 4 | 0.45 | 691.57 | 3.76 | 619.16 | 6.37 | | 3.31 | | 5.91 |
| M | Irish | 4 | 0.45 | 2,388.06 | 12.99 | 2,388.06 | 24.55 | | 12.54 | | 24.10 |
| N | Italian | 6 | 0.68 | 1,000.01 | 5.44 | 1,000.01 | 10.28 | | 4.76 | | 9.61 |
| O | Nepalese | 3 | 0.34 | 78.86 | 0.43 | 62.81 | 0.65 | | 0.09 | | 0.31 |
| P | New Zealand Peoples, nfd | 8 | 0.90 | 207.77 | 1.13 | 0.05 | 0.00 | | 0.23 | 0.90 | |
| Q | North African and Middle Eastern, nfd | 3 | 0.34 | 17.40 | 0.09 | 7.56 | 0.08 | 0.24 | | 0.26 | |
| R | Polish | 3 | 0.34 | 183.97 | 1.00 | 183.97 | 1.89 | | 0.66 | | 1.55 |
| S | Sri Lankan | 4 | 0.45 | 156.85 | 0.85 | 110.92 | 1.14 | | 0.40 | | 0.69 |
| T | Thai | 3 | 0.34 | 70.24 | 0.38 | 70.24 | 0.72 | | 0.04 | | 0.38 |
| U | Vietnamese | 5 | 0.56 | 294.80 | 1.60 | 294.8 | 3.03 | | 1.04 | | 2.47 |
| V | Other | 46 | 5.19 | 2,719.19 | 14.79 | 1,857.64 | 19.10 | | 9.60 | | 13.91 |

The data collection process for this study involved an extensive examination of LTMP cases from various sources, including the ABS and the Newiss (2005) study. The ABS data was classified according to the ABS ASCCEG categories of "Caucasian and Australian" and "Caucasian", while the Newiss (2005) data was based on London white European population. The data was collected and analysed to understand the trend of LTMP cases in different ethnic groups.

The results of the study revealed that among all ethnic groups, Caucasians (~74%) and Indigenous (~7.33%) appeared to be overrepresented in LTMP cases. Due to issues of clarity however, surrounding ethnicities within the data reported by ABS, it is difficult to accurately determine the actual percentage of Caucasians and Indigenous peoples among the LTMP population.

In order to further understand the trend, a comparison between "Expanded ethnicities" and "Exact ethnicities" was conducted which revealed that, depending on the ABS ASCCEG categories, the percentage of Caucasian LTMPs ranged between ~34% to ~39%. Additionally, the Newiss (2005) study found that 35% of uncleared missing person cases were Caucasian,

although the study did caution about the data accuracy of ethnicity counts due to issues stemming from coding practices.

Furthermore, the study by Cohen, McCormick, and Plecas (2008) [32] found that Caucasians made up 73.6% of uncleared missing person cases, while Sekela, Plecas, and Cohen (2010) [9] identified 67%. While Cohen, McCormick, and Plecas (2008) [32] provided no data on population counts, Sekela, Plecas, and Cohen (2010) [9] noted that due to the high population of Caucasians in the study area, the data seems to suggest that this ethnic group was underrepresented.

In this study, descriptive analysis was used to examine the data and identify patterns and trends in the LTMP cases. The descriptive analysis included calculation of the percentages of different ethnic groups among the missing population, as well as comparing the data from different sources. The data was also presented in the form of tables (refer Table 5–2 below) and figures (refer Figure 5–8 below) to provide a visual representation of the findings. This helped in understanding the representation of different ethnic groups in the LTMP cases and also helped in identifying any discrepancies or patterns in the data.

CHAPTER 6

DISCUSSION

6.1 Introduction

The chapter aims to discuss the findings of this thesis in relation to the use of online information to identify patterns of significance among LTMPs in Australia. The original research aimed to analyse the available online information on individuals who went missing in Australia and are now considered LTMPs. The study had three main objectives: (1) to determine the online information that is available on these individuals, (2) to evaluate the effectiveness of using online sources to identify patterns of significance, and (3) to discuss how online information can address or minimise known data access and integrity issues.

The following questions will guide the discussion:

- RQ1. What personal data is publicly available on individuals identified as missing long-term in Australia?
- RQ2. How can publicly available data be analysed to identify patterns of significance, if any, among those identified as missing long-term in Australia?
- RQ3. How can using publicly available data address issues of data integrity compared to having data provided by third parties?

The chapter starts by outlining the study topic, the benefits of gathering data using online sources, and how this data can be converted into meaningful results. The creation of the LTMP dataset from online sources is explained, and the results found in Chapter 5 after analysing the dataset and then compared to existing research outcomes. A descriptive analysis was used in this study, and the results suggest that the use of online sources provides a legitimate avenue for researchers to gather data that can expand our limited understanding of LTMP and those at risk of becoming a LTMP. The limitations faced in this study are addressed in the final section.

6.2 Data collection

To ensure replicability, the study introduced standards for data collection. Two websites were identified as sources for potential LTMPs i.e., the NMPCC, a non-operational arm of the AFP, and the AMPR. A cross-sectional approach was taken and only those considered LTMPs as of 19 May 2020 were included in the study. A set of criteria were established for inclusion in the study, such as being unlocated as of the specific date, having disappeared while in Australia, having a law enforcement jurisdiction identified, and having an age or reported age locatable.

Over 6,700 online sources were reviewed using the LTMP's name or variations of the name, resulting in 1,043 LTMPs being included in the study. The data collection focused on four major characteristics being jurisdiction of disappearance, age disappeared, gender, and ethnicity. The ethnicity data was the most challenging to collect and determine, as it was often obtained from a combination of sources and often required locating ancestral history.

The creation of the LTMPs dataset took approximately 18 months, followed by descriptive analysis, where frequency, central tendency, dispersion and position were established on jurisdiction, age disappeared, gender, and ethnicity. These results were explored in detail in Chapter 5.

6.3 Results

Descriptive analysis was used to analyse the LTMP data. The approach involved carrying out basic comparisons using Microsoft Excel, which enabled the identification of data entry errors and inconsistencies. Throughout the analysis process, data was checked for possible discrepancies and updated if necessary. A univariate analysis was performed for each variable, jurisdiction, age disappeared, gender, and ethnicity. Any records that were of concern were reviewed and adjusted accordingly. This process was employed prior to finalising any results from the univariate analysis. The outcomes of the results were found to be similar to the three existing studies on LTMPs.

The results showed a limited correlation between the ABS ERP of a jurisdiction and the number of reported LTMPs, with a difference of approximately $\pm 5\%$. It was found that VIC, when compared to all Australian jurisdictions based on population percentages, had the second highest population however had the lowest number of LTMPs. The VIC jurisdiction was an anomaly in relation to the ABS ERP and number of LTMPs listed under that jurisdiction. The difference of 16.28% indicated that VIC had significantly less LTMPs per capita than any other jurisdiction. Without establishing the factors that influenced this 16.28% variance, the causes could only be speculated, such as, VIC listed less LTMPs than any other

jurisdiction, or law enforcement practices prevented missing person from becoming LTMPs. Understanding the cause of this variance is beyond the scope of this study, however this difference suggests further investigation is warranted. Findings from further studies may result in changes being implemented resulting in similar outcomes replicated across the other seven Australian jurisdictions.

The age range of LTMPs was found to be between 25 and 44 years old, with middle adulthood being the most at risk. Adult Caucasians, in particular males, between the ages of 30 to 40 years old were at the highest risk of becoming a LTMP. This finding was supported by existing studies and suggested that country of disappearance had no impact on the age range or that Caucasians are overrepresented.

The results indicated that again there is a strong correlation between the ABS ERP average age, 39.32 years, and the average age of LTMPs being 37.13 years. The results suggest that middle adulthood (25 to 44) [76] are most at risk of becoming a LTMP. Existing studies by Bricknell [38], Newiss [31], Cohen, McCormick, and Plecas [32], and Sekela, Plecas, and Cohen [9] support the age range. The specific age range however varies between Bricknell [38] and the international studies, Bricknell [38] considered 25 to 44 years old, while the three studies on unlocated missing persons suggested 30 to 40 years old. This variation between age ranges may be due to Bricknell [38] looking at missing persons in general and LTMPs data was limited, while Newiss [31], Cohen, McCormick, and Plecas [32] and Sekela, Plecas, and Cohen [9] focussed on unlocated missing person. The two points worthy of note when comparing studies is country and time. The age range outcomes from all studies were very similar suggesting that regardless of where the unlocated person was last seen, country of disappearance has no impact on age range in either the UK, Canada, or Australia. This observation is considering country only, as opposed to any high-risk areas in the vicinity of the missing persons last known sighting. In Australia, it is reasonable to assume that desert areas for example, the outback in the middle of summer during the day can exceed 33°C (91.4°F) [104], would be categorised as a high-risk locality. Specific locations considered more dangerous than others were excluded from any analysis in any studies. The second observation relates to time between studies. There has been no significant shift in the average age or age range between Newiss' 2005 study [31], Cohen, McCormick, and Plecas 2008, [32], and Sekela, Plecas, and Cohen, 2010 [9]. The lack of any noticeable changes in age range or average age in fifteen years highlights the need for greater understanding of the reasons why individuals go missing and do those reasons reflect age commonalities.

The outcome from analysing the gender of LTMPs is relatively limited. The results do however show that there is a disproportionate number of long-term missing males (67.4%), compared to females (32.5%) and the ABS ERP, males (49.56%) and females (50.44%).

Bricknell's study on missing persons in general also found that more males went missing compared to females, however the variation was only 2.6% as opposed to male LTMPs where the difference was over thirteen times higher (34.9%) than of male missing persons in general. The results of Newiss' (UK) [31], and Canadian researchers Cohen, McCormick, and Plecas [32] and Sekela, Plecas, and Cohen [9] identified similar results being females appeared to be underrepresented, again by a significant amount. In Newiss' study, males (60%) were more likely to be unlocated, while females were one third lower at 40%. Cohen, McCormick, and Plecas 2008 [32] found that males made up 82.2% of unlocated cases, whereas only 17.8% of females remained missing. Sekela, Plecas, and Cohen 2010 [9] again identified that more males (66%) than female (34%) remained unlocated. The difference in Sekela, Plecas, and Cohen study between males and females was 32%, the 32.9% difference between identified genders using online sources was comparative with a variance of only 0.9%.

No studies provided analysis on those individuals that identified as non-binary or gender neutral. James, Anderson, and Putt [6] highlighted the issue of under-reporting those outside of binary gender. The results from the online searches where only one person was listed as "other", indicates that James, Anderson, and Putt position in 2008 [6] may still be relevant in 2020. The lack of online information surrounding LTMPs who identified as other than male or female eliminated any opportunity for analysis.

In all three international studies in addition to this study, females were underrepresented. The international studies however expanded upon this divide by explaining that gender when married with other characteristics i.e., age, ethnicity, suspected cause, provided greater insight into those most at risk. Newiss found that missing homicide victims were more likely to be females than males at 2:1 [52]. While gender alone is informative when categorising LTMPs, additional multivariate research is required for greater insight into the who and why individuals may become a LTMP.

Evaluating only "Expanded ethnicities" where there was 659 (63%) LTMPs and a Caucasian population of 7,298.84, this would suggest that approximately 1:11.08 ($n=1,000$) could potentially become a LTMP. Indigenous LTMPs and those considered to be Caucasian, seem to parallel the findings seen in Cohen, McCormick, and Plecas 2008 [32] and Sekela, Plecas, and Cohen 2010 [9] studies. Both studies found that proportionally, Indigenous ethnicities were overrepresented in relation to outstanding missing persons. The two Canadian studies, both investigating different Canadian proveniences, provided Indigenous population estimations of between 5% to 6%. The study of 2008 found that 16.6% of those yet to be located were Aboriginal, while the 2010 research identified Aboriginal/First Nations/Indigenous ethnicities to account for 22% of unlocated individuals. Although the number of Indigenous LTMPs who went missing while in Australia when compared to the population were lower than

the Canadian studies by approximately 7%, this group is consistently overrepresented. The “Expanded ethnicities” determined the Indigenous population to be 0.79% while “Exact ethnicities” had an Indigenous population at 0.1%. Again, evaluating only “Expanded ethnicities” where there was 65 (6%) LTMPs and an Indigenous population of 144.90, 1 in every 2,230 (approximately) Indigenous Australians compared to 1 in every 11,080 (approximately) Caucasians could become a LTMP. This would indicate that those of Indigenous ethnicity have a 1:2.23 ($n=1,000$) chance of becoming a LTMP, four times higher than Caucasians. This result reflects the findings by Sekela, Plecas, and Cohen 2010 [9] who revealed that the number of Aboriginal people yet to be located in Alberta, was nearly four times higher than the First Nations population in that region."

The remaining twenty ethnicities, excluding “Americans” and “New Zealand Peoples, nfd”, remained over or underrepresented in “Expanded ethnicities” and “Exact ethnicities”. “Americans” and “New Zealand Peoples, nfd”, were the only two ethnicities that swapped represented position when evaluating the results of the alternate counts. Applying “Expanded ethnicities” to “Americans” indicated an overrepresentation, while “New Zealand Peoples, nfd” appeared to be underrepresented based on ethnic population numbers. “Americans” and “New Zealand Peoples, nfd” changed to underrepresented and overrepresented based on “Exact ethnicities”, however in both instances, the variation was under 5%. Due to the complexity surrounding ethnicities and matching to ABS ASCCEG data, no further analysis was carried out.

While it is important to provide a comparison of both ethnicity counts (“Expanded ethnicities” and “Exact ethnicities”) only “Expanded ethnicities” will be considered when summarising the findings from the analysis. The intent of selecting the ethnicity count with the higher population count is to accommodate the uncertainty surrounding ABS ethnicity counts. Due to self-reporting and possible inaccuracies when attributing an ethnicity to a LTMP and matching that with ABS data for ethnicity categorising. Previous studies found that ethnic minorities were overrepresented, however this study found ethnic minorities, excluding Indigenous peoples were underrepresented. Further investigation is required to understand and explain why ethnic minorities are underrepresented in Australia when other studies suggest otherwise. The cause of this discrepancy could be exclusion of LTMPs who are in minority groups having profiles created on sites such as NMPCC and AMPR. This could be either at the discretion of law enforcement or at the request of families. Another cause could relate to the accuracy of ABS data and ethnicities. A final yet unknown issue could be associated with cultural concerns of families and trust or knowledge of how to report a missing person. This study recognises the issues faced by ethnic minority groups, however at this stage, results suggest ethnic minorities are underrepresented.

The two ethnicities focussed on for analysis, Caucasian and Indigenous peoples appear to have results comparable to the studies by Newiss (2005), [31], Cohen, McCormick, and Plecas 2008 [32] and Sekela, Plecas, and Cohen 2010 [9]. Newiss [31] highlighted the concern of ethnicity accuracy due to coding practices, and the same point needs to be considered in relation to the information used in this study. As the ethnicity counts relied on the 2016 Census, generated through self-reporting to the ABS, the reliability of the results relating to ethnic minorities need to be weighed with some hesitation. This approach of dubiousness for ethnic minorities can be somewhat curtailed when considering the legitimacy of the results of overrepresentation of Indigenous LTMPs. Although an ethnic minority, counts relating to Indigenous peoples has a stronger foundation of certainty as opposed to other ethnic minorities who may have ancestors born outside Australia.

In addition to identifying overrepresentation of Indigenous peoples evidenced from results and also supported in the two Canadian studies, Newiss (UK) [31], Cohen, McCormick, and Plecas 2008 [32] and Sekela, Plecas, and Cohen 2010 [9] this clearly stated ethnicity alone provides only limited information. Cohen, McCormick, and Plecas 2008 [32] and Sekela, Plecas, and Cohen 2010 [9] found that although men are more likely to remain unlocated, women as opposed to men are at higher risk when ethnicity is factored in. Overall, ethnicity needs to be combined with other characteristics to gain a deeper understanding of those who may go unlocated for long periods of time, if ever.

The study was designed to investigate what online data was available on LTMPs and could that data address integrity issues and in doing so reveal more informative and accurate patterns of significance following that analysis. The findings suggest that using online sources is possibly more accurate as opposed to data supplied from law enforcement across Australia and NGOs. Using online sources provides names, therefore issues of privacy are minimised, which allows researchers to cross check the identified information being analysed. Additionally, researchers are not limited to studying only the data they are were provided from third parties. Online sources provide a multitude of variables from which researchers choose to research. Having such data restraints removed allows researchers the opportunity to move forward and expand the variables of LTMPs, on which future studies can focus.

In conclusion, the study utilised descriptive analysis to analyse the available online information on LTMPs in Australia. The results showed limited correlation between the ABS ERP of a jurisdiction and the number of reported LTMPs however there was a strong correlation between the ABS ERP average age and the age of LTMPs. Gender was another characteristic that failed to be reflective of the ABS data, that being close to 1:1 ratio while those included in the study showed for every female, two males were remained missing. The overrepresentation of minority ethnicities among the unlocated was a finding prevalent in both

this study and the three earlier studies. The findings indicate online data can be cross validated through multiple sources and which can be analysed using statistical methods. This self-sourcing approach also demonstrated the reliance on third parties to be the sole providers of information on LTMPs can be minimised. Finally, this research supports the position that, as stated by the majority of researchers, more research is needed on those consider LTM, both in Australia and internationally.

6.4 Limitations

This study faced several limitations, the most concerning related to access of policing policies designed to provide law enforcement with direction when investigating missing and LTMPs. Creating such policies appear to be the responsibility of the ANZPAA, Victorian based NGO for distribution and application among law enforcement agencies. Policies such as the Missing Persons – A policy for Australian policing (2015) and Australian and New Zealand policy are created by reviewing existing law enforce practices to ensure they current and reflect best practices reflective of evidence-based research [106]–[107]. ANZPAA is an NGO whose strategic priorities, as outlined in the Business Plan 2020–21 [106], explore avenues for cost effective strategies for resource optimisation. Attempts to access the missing person policies was denied by ANZPAA, a copy of the response can be found in Appendix U. As an NGO, access to documents fail to meet the Freedom of Information Act, 1982 and Right to Information Act, 2009 (RTI Act), as only documents held by government departments, agencies, Ministers, and Victorian public sector agencies are accountable to either Act [108]–[109]. The issue of access to ANZPAA documents was mentioned by research in the Research Report on Police responses to people with disability [110]. This inability to access documents created from evidence-based research, potentially limits the opportunity to value add to this research. As it is unknown what information is in these policies that are used for operational purposes, in relation to missing and LTMPs, any possible benefits for expanding knowledge are unable to be ascertained. Limiting access to information on an already under researched group, increases the difficulty in producing results of significance.

Similar to many other studies on missing persons, the most commonly identified limitation is data accuracy and availability. In Australia, law enforcement agencies report annually that approximately 2,600 [93] persons remain unlocated in total across all jurisdictions. This number only relates to those reported to law enforcement. Quinet, coined the term “the missing missing”, meaning those who are known to be missing however are never reported to law enforcement or unknown to be missing [43]. Those that fall into that category become part of the underreported meaning data on missing persons, short or long-term, can

only be approximations, at best. In further support of this understanding, in the research by Henderson, Henderson and Kiernan, 2000 [51] and James, Anderson, and Putt, 2008 [6] both studies sourced data on missing persons from non-government agencies. Many researchers point out that the quality and quantity of the information collected by those tasked with locating a missing person, contributes to producing inaccurate results. The causes of mishandling and errors in data include, jurisdictional specific processes and data entry, quality control issues, limited field selection, and human error. During the collection and pre-processing of data for this study, these same availability of information and recurrent inaccuracies highlighted by past researcher were again apparent. There is no suggestion that data errors are deliberate, however as previous researchers suggest, greater consideration is needed in system development [6], [31], [49].

Another limitation realised related to terminology. James, Anderson, and Putt, 2008 [6] also found that “inconsistency in definitions of key variables across jurisdictions”, impacted the data when interpreting terms and maintaining consistency. In this study, the terms date missing, missing since, reported missing, last known sighting, and other similar phrases appear to be, at times, interchangeable. This caused some confusion around reporting an accurate missing since date. The NMPCC applies the wording “missing since” in a LTMPs profile. This date, at times, conflicted with information included in Coroner’s reports and earlier released data. This resulted in potentially some incorrect age calculations when DOB is close to the date of disappearance, when date disappeared is open to interpretation.

The data collected for this study was only on 1,043 LTMPs. All initial LTMPs could be identified through two websites that list a large number of unlocated individuals. Using a cross-sectional approach, data was analysed based on a specific date. Applying this method to collect data that was used in this study would fail if applied to generic missing persons. Due to the most missing persons being under the age of eighteen (privacy issues) and generally located within two days to a few weeks, the suggested likelihood of successfully gathering public data on all missing persons when they first disappear would be unrealistic. Another issue that might impact the feasibility of relying on online sources for information, is the study’s analysis approach. If a study was longitudinal, the time taken to manually update the information on LTMPs and/or add/remove LTMPs from the study would be impractical. Using web crawling and web scraping tools which are programs to source data from the Web, may improve the chances of success for longitudinal studies. The likelihood of success would need to be evaluated on a case-by-case basis. These same tools however would elicit minimal to no significant data on individuals missing short term. Information about generic short term missing person would still need to be obtained from active and invested stakeholders.

Aligning ethnicity of a LTMP against that of the ABS ASCCEG data [101] raised some difficulties. Some misallocations of ethnicities potentially occurred. The mismatch was a result of the way the data was recorded online and the need to manually redefine a person's ethnicity against that of the ABS ethnicity categories. This misclassification was most evident when assigning ABS ethnicities to LTMPs who would be considered part of the ethnic minorities. Even though this may have occurred the overall impact of the final results failed to eliminate the issue of over or underrepresentation of those minority groups among the LTMPs. The latest Australian Ethnicity counts were released 28 June 2022, with reference to the 2021 Census [105]. Unfortunately, the results were released too late for this study. The ethnicity analysis for this study was based on the 2016 Census data.

The final limitation related to time constraints. The study had a completion deadline of two years. The number of LTMPs identified for this study was 1,043. This resulted in the over 6,700 identified online sources accessed which included, websites, webpages, and PDF files, that were scrutinised for information pertaining to individual LTMPs. Prior to analysing the data, the time taken to identify the LTMPs, source data about the LTMPs, creating a dataset based on specific LTMP characteristics, concluding with data cleaning by rectifying errors and missing information, was approximately eighteen months and continued during analysis. This reduced the number of characteristics that could be analysed, resulting in this study focussing on univariate analysis as opposed to multivariate although jurisdiction was included with each univariate (age disappeared, gender, ethnicity). The quality of the results remained unaffected however, the ability to carry out multivariate analysis was unachievable. Although some assistance was provided in the collection of data, the majority of the work associated with the development of the LTMP dataset was carried out by the author.

Currently little is known about the characteristics of LTMPs. Analysing characteristic data retrospectively of LTMPs provides profiling opportunities. Profiling LTMPs allows for an overarching view of individuals who are at risk of becoming a LTMP. Tools such as profiling develops an insight into factors that may contribute or identify a person currently missing or who may go missing and the probability of those individuals becoming LTMPs. While profiling may fail to definitively predict if a person will become LTM, profiling does provide decision making information to LTMP stakeholders, including service providers, law enforcement agencies and government policy makers. Having such information assists stakeholders in developing policies and procedures that are proactive driven as opposed to reactive driven. Proactive approach strategies are focussed on preventative measures, preemptively addressing outcomes where distress and harm are potentially foreseeable, and the reprioritisation of resource allocation (including funding and law enforcement). Understanding

the age range characteristics of LTMPs contributes to the creation of knowledge, which can assist stakeholders taking this more remedial approach.

This study looked at the availability of online characteristic data about individuals missing in Australia, established the viability of that information's wholeness and accuracy and the ability to then use that data to provide to insight into any commonalities among LTMPs. The rhetoric of many researchers is that more research needs to be on missing persons, and by extension LTMPs. Currently research on LTMPs is limited. Newiss (2005) [31] provide the most significant insight into individuals that have remained missing for an extended period of time. Newiss' research focussed on the equivalent of Australian LTMPs specifically while other researchers often looked at missing person in general or investigated unlocated peoples based upon a predefined criteria such as age, foul play or those with neurocognitive disorders. Information about LTMPs appears in several studies however the information is often incidental to the research topic. Through analysis and reviewing existing literature the results seen in this study mirror those of Newiss' 2005 UK [31]. While Newiss' (2005) [31] study looked at those unlocated people in the UK, this study focussed on LTMPs in Australia (2020). In comparing the results of the two studies carried out 15 years apart, the percentage results in relation age, gender and ethnicity have remained relatively unchanged. This suggests a number of points for consideration.

In the 2005 study by Newiss, the long-term missing were UK situated while this study investigated those LTMPs in Australia. The statistics on age, gender and ethnicity varied insignificantly, suggesting that jurisdiction has little impact on those that may become a LTMP. It is acknowledged that certain areas within any given jurisdiction may elevate risk such as the unforgiving outback of Australia if a person runs out of fuel or sex workers living and working in unsafe areas. These examples are both potentially perilous situations indicating any person in such scenarios has a higher risk of harm. The specific environments of each jurisdiction were beyond the scope of this study. No inclusion, exclusion, or consideration was given in Newiss' analysis [31], pertaining to dangerous activities and/or unfortunate events in relation to age, gender, or ethnicity. As issues with specific location was disregarded in both studies, the overall impact of specific areas with high or low level of risk can be omitted without influencing the final results. This being the case, there appears to be no correlation between jurisdiction and the three remaining characteristics, age, gender, and ethnicity.

This lack of connection between jurisdiction and age, gender and ethnicity could indicate an opportunity for stakeholders across international jurisdictions, to jointly develop, universal best practice strategies. Those strategies could be implemented in any jurisdiction with an expected improved outcome. Those tasked with investigating LTMPs could employ those strategies, in conjunction with specialised locational knowledge, to reduce current and

potentially reduce LTMP cases. Unfortunately, without further research into LTMPs, this suggested model is supposition only.

In addressing system and processing issues, data collection may improve while also minimising error rates and handling time. In 2016, the Australian Criminal Intelligence Commission (ACIC) provided a submission to “*Productivity Commission’s Inquiry into Data Availability and Use*”, outlining the advantages of appropriate data sharing between and for both law enforcement and community [111]. In response to this submission and those from other stakeholders combined, the Australian Government reacted positively to the proposed benefits resulting from conditional data sharing [112]. Systems such as the National Police Reference System (NPRS) developed by the ACIC [20] should be encouraged, thereby allowing greater jurisdictional interconnection and data sharing. It could also be suggested that as “*going missing is not a crime*” [113], the only centralised system possibly utilised for the collection of information in relation to a missing person appears to belong to NPRS.

Terms of reference to describe missing persons and LTMPs needs to be developed to improve data accuracy. Having consistent terminology across law enforcement jurisdictions may reduce data errors due to individual interpretation while also possibly increasing cross matching success. Providing law enforcement jurisdictions with improved DMS should increase information accuracy, minimise periods of absenteeism, and allow for more strategic resource allocation. This could be achieved by developing and implementing one centralised DMS with machine learn capabilities, that has data sharing abilities across multiple systems and usable on various platforms.

Future research may benefit from utilising a quantitative analysis approach, utilising the suggested data, to conduct cross-sectional studies. This method of analysis has the potential to reveal previously unknown patterns and associations regarding LTMPs, providing a deeper understanding of this complex issue. Furthermore, future analysis could also include a descriptive statistical analysis, such as frequency distribution, central tendency and variability, or a multivariate analysis, such as multiple regression, logistic regression, discriminant analysis, to understand the relationship among different characteristics of the missing persons and LTMPs and their outcome.

CHAPTER 7

OVERVIEW/SUMMARY

Every year, approximately 38,000 (2020) people are listed as missing with law enforcement Australia wide. There is a further untold number of individuals who fail to be reported or yet considered as missing. Of those who have been reported, ~98% are often found within hours, days or weeks from the time law enforcement are notified of their disappearance. The remaining ~2% (aka LTMPs) are either located sometime after three months or never located, meaning their cases may be unresolved may take months or even decades since they initially vanished. This ~2% suggests that for every 49 people found within three months, 1 person is at risk of vanishing and may never be located. Currently Australia has approximately 2,600 (known) LTMPs.

Over the past thirty years, researchers, Australian and international, began to recognise the need for greater understanding of the events, causes, and the characteristics of those who go missing. The benefit of understanding the events, causes and characteristics, is a proactive way of identifying those most at risk. Unfortunately, since 1988 less than 150 studies have been published on missing persons, and only three of those relate specifically to LTMPs. Most of these studies report issues of data accessibility, followed by the reliability of that data. Those same researchers also acknowledge the need for more research into missing persons (and by extension LTMPs). It is evident from published papers that more studies are needed. The lack of available data in terms of quantity and quality means researchers face an insurmountable hurdle of carrying out studies of significance.

Existing studies, however, do provide an overarching view of why specific groups such as children, the elderly, and those with neurocognitive disorders are considered high risk in relation to disappearing. Other studies have been able to identify causes as to why people go missing and have categorised these causes into “escape”, “unintentional”, and “dysfunctional”. “Dysfunctional” is a subcategory of both “escape” and “unintentional”. All but three studies have focussed on missing persons as a whole, other studies generally mention LTMPs in passing. This, rightly or wrongly, appears to have resulted in LTMPs being overlooked as a topic of research.

A major contributing factor as to why LTMPs may have been overlooked is the lack of definition. Unlike Australia (i.e., more than three months) and Scotland (i.e., 28 days or

more), most countries fail to officially define a time frame for when a missing person shifts to a LTMP. From available information, the generally accepted time, in most countries, before a person is considered long-term missing is one year. The previous studies on LTMPs occurred in the UK (England), with one study in 2005, and Canada, two studies, 2008 and 2010, and neither country has a time missing policy for LTMPs. Countries that have taken the initiative to create policies framing LTMPs need to be commended, however questions need to be raised as to why the afforded opportunities for research on LTMPs have failed to be taken advantage of.

This study attempted to address this lack of research on LTMPs however determined that access to data through normal channels i.e., law enforcement jurisdictions, was both time intensive without any guarantee of success, and possibly unpublishable. This meant a new approach to LTMP data gathering was required. The alternative method decided upon was accessing publicly available online sources. As no previous studies on missing or LTMPs had derived their data in this way, it was unknown what or if any information of value could be found. This raised the first of three questions this study intended to address, “What personal data is publicly available on individuals identified as missing long-term in Australia?”. In addition to a number of unforeseen benefits, it was found that online sources provided information beyond the researcher’s expectations.

It was established that using online sources enabled information to be gathered beyond the scope of this study. As LTMPs were initially identifiable from NMPCC and AMPR, data was able to be cross verified by accessing multiple sources webpages and websites. Having the ability to double check information improved data accuracy and identified additional information that could be used for future research. Study opportunities were no longer limited by what information was provided to the researcher by each law enforcement jurisdictions and/or NGO’s. Using online sources also meant time spent on approval requests for data could be allocated to data gathering and collation. The issue of ownership of data and datasets were removed, meaning the deidentified dataset/s could be made available to other researchers which they could expand and/or analyse using other methods. It is acknowledged that a notable flaw in this study was the number of LTMPs included. Of the approximate 2,600 LTMPs in Australia, only 1,043 were identified by accessing only the NMPCC and AMPR. Over time, creating a public dataset on which future research could be scaffolded, it is expected that this number of LTMPs listed would increase and therefore minimise the gap of around 1,600 being the number of LTMPs omitted. Although less than half all known LTMPs were excluded from the study, the findings still produced results of significance. The only evident limitation to using online sources for data collection relate to time taken to compile the dataset. Investigating large groups, such as missing persons in general, where there are high and timely recovery rates would be extremely difficult. For a LTMP dataset to be viable in longitudinal studies, the

database would need to be updated regularly with new LTMPs while also reviewing missing data belonging to ongoing cases. Again, supporting concerns relating to time for collection of data.

Once the viability of using online sources was established, the question of “How can publicly available data be analysed to identify patterns of significance, if any, about those identified as missing long-term in Australia?” needed to be addressed. To identify if online data could provide enough information for pattern analysis, four characteristics were selected. These four characteristics were chosen based on the most commonly occurring characteristics seen in previous studies on missing persons and LTMPs. The four characteristics were the jurisdiction of the law enforcement agency responsible for the LTMP case, age disappeared i.e., calculated based on the difference of birth date and 19 May 2020, gender, and ethnicity. Excluding jurisdiction, the age disappeared, gender, and ethnicity produced patterns that could be compared against the findings in the 2005, 2008, and 2010 studies on LTMPs. To find patterns within the data, characteristics of the same type were compared and then evaluated against the ERP, as provided by the ABS. A variance of $\pm 5\%$ was considered normal and therefore was considered to have little to no significance on the overall results.

Each jurisdiction had the total count of LTMPs belonging to that law enforcement jurisdiction. Those counts were then compared against the population counts of that specific state or territory. Of the eight jurisdictions, only NSW and VIC were noticeably different. NSW had the highest population count, and as expected, the highest number of LTMPs. The total NSW percentage variance of just over -11% showed that significantly more missing persons became LTMPs compared to any other jurisdiction. VIC, who had the second highest population count was found to have, comparatively, a lower number of LTMPs in relation to the population.

Age at the time of disappearance was able to be analysed using online sources. . Unlike missing persons in general, which indicated the age and gender tended to be between females between 13 and 17 years old, LTMPs are more likely to be older males and closer to 40 than 30 years old. The current literature has provided no clear reasoning as to why more LTMPs are within the age bracket of middle adulthood. Using online sources to obtain data relating to LTMPs aged between 30 and 40 years old is a topic that could be considered for future research.

Gender was another characteristic that had been previously reported on in the earlier LTMP studies. Like the earlier research, this study found males were more likely to remain unlocated. The majority of those identified as LTMPs were found to be males. The difference was quite significant, being only one in three were noted as female. Of the 1,043 LTMPs included in this study, all but one was listed as either male or female.

Ethnicity was the last characteristic to be analysed. The UK study, as opposed to the Canadian research and this study, identified minority ethnicities as a characteristic. In contrast to the UK, both Canada and Australia have recognised Indigenous peoples. Indigenous peoples are recognised as First Nations people, however due to population counts they are also included in the ethnic minorities. All studies found that the most common ethnicity among LTMPs were Caucasian, however the researchers also noted that LTMPs belonging to ethnic minorities were overrepresented. The Canadian studies highlighted that the overrepresentation disparity was most prevalent among those Indigenous to that region. An important key finding from the 2010 Canadian study was that Indigenous peoples were four times more likely, based on population numbers, than Caucasians to remain unlocated. Those same results were replicated in this study when analysing Indigenous Australians and the likelihood of those LTMP cases remaining unresolved, when compared to Caucasians. All studies do highlight that ethnicity data can be skewed based on provider of ethnicity data and the collection methods applied to obtain that data. This awareness of potential inaccuracies of ethnicity data fails to explain how research, over 10 years apart, from two separate countries, from different data sources could produce the same findings.

A final key point addressed by Newiss [31] and shown in all findings on LTMPs, was that individual results only provide an overall view of those at risk. The benefit of data ownership is to minimise the reliance of third parties to provide data. Having access to this data will enable researchers to obtain a clearer understanding of the patterns relating to LTMP's behaviours, actions and situations which existed prior to those individuals shifting from missing to long-term missing. Applying findings based only on individual characteristics provides minimal direction if referred to for decision and policy making purposes. To expand the tools and knowledge needed to assist those who are given the responsibility to locate LTMPs, more research on combined characteristics is required. With issues around data accessibility and accuracy hindering those interested in researching LTMPs, using online data sourcing is an effective method to circumnavigate, to some degree, those concerns.

The last research question "How can using publicly available data address issues of data integrity compared to having data provided by third parties?" has been successfully addressed in this study. This outcome however is acknowledged as a subjective opinion. Without more researchers testing the option of using online sources as a tool for gathering data, and then creating publicly available datasets, this study can only suggest future research would benefit from using online sources. Removing data ownership issues, being able to cross check any data as data would be deidentified or traceable (reversing deidentification), and removing research limitations i.e., can only analyse data received from third parties are outcomes that would ultimately add value and expand our knowledge on LTMPs.

References

- [1] Australian Criminal Intelligence Commission, “*About*,” 2021. [Online]. Available: <https://www.acic.gov.au/about>
- [2] N. Morris. “Introduction.” Australian Missing Persons Register. <http://www.australianmissingpersonsregister.com/Introduction.htm> (accessed Jan. 10, 2022).
- [3] Australian Government – Australian Business Register, “*ABN Lookup*,” 2014. [Online]. Available: <https://abr.business.gov.au/Help/EntityTypeDescription?Id=00115>
- [4] Australian Government – Australian Business Register, “*ABN Lookup – Current details for ABN 51 537 811 305*,” 2014. [Online]. Available: <https://abr.business.gov.au/ABN/View?abn=51537811305>
- [5] Austlii. “About.” <http://www.austlii.edu.au/about.html> (accessed Dec. 12, 2020).
- [6] M. James, J. Anderson and J. Putt. “*Missing persons in Australia*,” Australian Institute of Criminology, Canberra, ACT, Aust., Research and Public Policy Series 86, 2008. [Accessed: Mar. 2, 2020]. [Online]. Available: <https://www.missingpersons.gov.au/sites/default/files/PDF%20-%20Publications/Missing%20Persons%20In%20Australia.pdf>
- [7] “*Performance Audit – Police responses to domestic and family violence*,” Audit Office of New South Wales, Sydney, NSW, Aust., New South Wales Auditor-General’s Report Apr. 2022. [Accessed: Oct. 3, 2022]. [Online]. Available: https://www.parliament.nsw.gov.au/tp/files/81863/FINAL%20Report%20-%20Police%20response_o%20domestic%20and%20family%20violence.PDF
- [8] “*Inquiry into the future impact of serious and organised crime on Australian society*,” Commonwealth of Australia, Canberra, ACT, Aust., Parliamentary joint committee on the Australian Crime Commission Sep. 2007. [Accessed: Oct. 3, 2022]. [Online]. Available: https://www.aph.gov.au/~/media/wopapub/senate/committee/acc_ctte/completed_inquiries/2004_07/organised_crime/report/report_pdf.ashx
- [9] M. Sekela, D. Plecas and I. Cohen. “A review of uncleared missing person cases and police responses in Alberta,” in M.S. thesis. School of Criminology and Criminal Justice, Univ. of the Fraser Valley, Abbotsford, Brit. Columbia, Canada, 2010. [Online]. Available: <https://arcabc.ca/islandora/object/ufv%3A336>
- [10] Australian Bureau of Statistics, March 17, 2022. “National, state and territory population tables – 31010do002_202109 National, state and territory population,

- Sep 2021 – Table 7 Estimated resident population, by age and sex—at 30 June 2020,” distributed by Australian Bureau of Statistics, <https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/latest-release>
- [11] Western Australian Police Force, “*Explanatory Notes*,” 2018. [Online]. Available: <https://www.police.wa.gov.au/Crime/CrimeStatistics/Explanatory-Notes>
- [12] A. Morgan, S. Lyneham, D. Davy and M. Coughlan. “*Towards national measures of alcohol-related crime*,” Australian Institute of Criminology, Canberra, ACT, Aust., Research Report 12, 2018. [Accessed: Oct. 3, 2022]. [Online]. Available: https://www.researchgate.net/publication/326676536_Towards_national_measures_of_alcohol-related_crime
- [13] Western Australian Police Force, “*Crime Statistics*,” 2022. [Online]. Available: <https://www.police.wa.gov.au/crime/crimestatistics#/>
- [14] “*Western Australia Police Property Management Practices*,” Corruption and Crime Commission of Western Australia, Perth, WA, Aust., Report of a joint inquiry by Western Australia Police and the Corruption and Crime Commission Dec. 2005. [Accessed: Oct. 3, 2022]. [Online]. Available: <https://www.legislation.qld.gov.au/view/pdf/inforce/current/act-1990-004>
- [15] Victoria State Government – Crime Statistics Agency, “*Explanatory notes*,” 2022. [Online]. Available: <https://www.crimestatistics.vic.gov.au/about-the-data/explanatory-notes>
- [16] Missing persons advocacy network. “About.” <https://mpan.com.au/about/> (accessed Jan. 12, 2021).
- [17] Missing persons advocacy network. “Our Work.” <https://mpan.com.au/ourwork/> (accessed Jan. 12, 2021).
- [18] National Missing and Unidentified Persons System. “About.” <https://namus.nij.ojp.gov/about> (accessed Apr. 28, 2020).
- [19] National Missing Persons Coordination Centre. “Research.” <https://missingpersons.gov.au/about/research> (accessed Oct. 27, 2020).
- [20] Australian Criminal Intelligence Commission, “Biometric and forensic services,” 2021. [Online]. Available: <https://www.acic.gov.au/services/biometric-and-forensic-services>
- [21] Australian Bureau of Statistics, “National, state and territory population methodology,” 2020. [Online]. Available: <https://www.abs.gov.au/methodologies/national-state-and-territory-population-methodology/jun-2020>

- [22] ACT Policing Online News. “Frequently asked questions.”
<https://www.policenews.act.gov.au/crime-statistics-and-data/frequently-asked-question> (accessed Oct. 3, 2022).
- [23] “*Police Service Administration Act 1990 (2022 Act No. 4)*,” State of Queensland, Forrest, ACT, Aust., Mar. 2022. [Accessed: Apr. 10, 2022]. [Online]. Available: <https://www.legislation.qld.gov.au/view/pdf/inforce/current/act-1990-004>
- [24] “*Police Service Administration Act 1990 (2016 Act No. 63)*,” State of Queensland, Forrest, ACT, Aust., Mar. 2022. [Accessed: Apr. 10, 2022]. [Online]. Available: <https://www.legislation.qld.gov.au/view/pdf/inforce/current/act-1990-004>
- [25] J. Atkin. “John Atkin Acting Commander, Northern Territory Police.” LinkedIn. <https://www.linkedin.com/in/john-atkin-mba/?originalSubdomain=au> (accessed Oct. 3, 2022).
- [26] Digital Territory – Northern Territory Government. “Implementing SerPro, a modern, proven and integrated digital policing system in the NT.”
<https://digitalterritory.nt.gov.au/digital-government/action-plans/action-items/implementing-serpro-a-modern-proven-and-integrated-digital-policing-system-in-the-nt> (accessed Oct. 3, 2022).
- [27] J. Ward, “The past, present and future state of missing persons investigations in Australia,” *Australian J. Forensic Sciences*, vol. 50, no. 6, pp. 708–722, May. 2018. [Online]. Available: <https://www-tandfonline-com.elibrary.jcu.edu.au/doi/full/10.1080/00450618.2018.1466535>
- [28] National Missing Persons Coordination Centre. “About.”
<https://www.missingpersons.gov.au/about> (accessed Nov. 29, 2022).
- [29] “*A policy for Australian policing – 2015*,” ANZPAA, Docklands, VIC, Aust., 2015.
- [30] Australian Bureau of Statistics, “*1301.0 – Year Book Australia, 2012*,” 2012. [Online]. Available: <https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1301.0~2012~Main%20Features~Criminal%20justice%20system~60>
- [31] G. Newiss, “A study of the characteristics of outstanding missing persons implications for the development of police risk assessment,” *Policing Soc.*, vol. 15, no. 2, pp. 212–225, Sep. 2005. [Online]. Available: <https://www.tandfonline.com/action/showCitFormats?doi=10.1080%2F10439460500071655>
- [32] I. M. Cohen, A. V. McCormick and D. Plecas. “A review of the nature and extent of uncleared missing persons cases in British Columbia,” School of Criminology and Criminal Justice, University College of the Fraser Valley, Abbotsford, Brit. Columbia, Canada, 2008. [Accessed: Oct. 27, 2020]. [Online]. Available: <https://www.researchgate.net/publication/>

- [33] J. Sarkin, “Why victimology should focus on all victims, including all missing and disappeared persons,” *Int. Review of Victimology*, vol. 25, no. 2, pp. 249–270, 2018. [Online]. Available: <https://doi.org/10.1177/0269758018817843>
- [34] International commission on missing persons. “Who are the missing?.” <https://www.icmp.int/the-missing/who-are-the-missing/> (accessed Dec. 16, 2021).
- [35] M. Henderson and P. Henderson. “*Missing people: Issues for the Australian community*,” Australian Bureau of Criminal Intelligence, Canberra, ACT, Aust., 1997. [Accessed: Jul. 15, 2022]. [Online]. Available: <https://missingpersons.gov.au/sites/default/files/PDF%20-%20Publications/Research/Australian/Missing%20People%20-%20Issues%20for%20the%20Australian%20Community.pdf>
- [36] B. Swanton, P. Wyles, R. Lincoln, P. Wilson and L. Hill. “*Missing Persons*,” Australian Institute of Criminology, Canberra, ACT, Aust., 1988. [Accessed: Nov. 11, 2020]. [Online]. Available: <https://www.aic.gov.au/publications/archive/archive-132>
- [37] N. Biehal, F. Mitchell and J. Wade. *Lost from view: Missing persons in the UK*. Bristol, U.K.: The Policy Press, 2003. [Online]. Available: https://www.researchgate.net/publication/265353766_Lost_from_view_Missing_persons_in_the_UK
- [38] S. Bricknell. “*Missing persons: Who is at risk?*,” Australian Federal Police, Canberra, ACT, Aust., Rep. 8, 2017. [Accessed: Mar. 2, 2020]. [Online]. Available: <https://www.aic.gov.au/publications/rr/rr8>
- [39] S. Bricknell and L. Renshaw. “*Missing persons in Australia, 2008–2015*,” Australian Institute of Criminology, Canberra, ACT, Aust., Statistical Bull. 01, 2016. [Accessed: Feb. 2, 2020]. [Online]. Available: <https://www.aic.gov.au/publications/sb/sb1>
- [40] C. Taylor, P. S. Woolnough and G.L. Dickens, “Adult missing persons: A concept analysis,” *Psychol., Crime Law*, vol. 25, no. 4, pp. 396–419, Oct. 2019. [Online]. Available: <https://doi.org/10.1080/1068316x.2018.1529230>
- [41] K. Shalev–Greene, L. Hayler and D. Pritchard, “A House Divided Against Itself Cannot Stand: Evaluating Police Perception of UK Missing Person Definition,” *Eur. J. Criminal Policy Res.*, vol. 28, pp. 1–17, Oct. 2019. [Online]. Available: <https://doi.org/10.1007/s10610-019-09428-0>
- [42] A. Sowerby and S. Thomas, “A mixed methods study of the mental health and criminal justice histories of missing persons,” *Police Pract. Res.*, vol. 18, no. 1, pp.

- 87–98, Aug. 2016. [Online]. Available:
<https://doi.org/10.1080/15614263.2016.1230062>
- [43] K. Quinet, “The Missing Missing: Toward a Quantification of Serial Murder Victimization in the United States,” *Homicide Studies*, vol. 11, no. 4, pp. 319–339, 2007. [Online]. Available: <https://journals-sagepub-com.elibrary.jcu.edu.au/doi/abs/10.1177/1088767907307467>
- [44] J.D. Hirschel and S.P. Lab, “Who is missing? The realities of the missing persons problem,” *J. Criminal Justice*, vol. 16, no. 1, pp. 35–44, Mar. 1988. [Online]. Available: [https://doi.org/10.1016/0047-2352\(88\)90034-7](https://doi.org/10.1016/0047-2352(88)90034-7)
- [45] S. Lyneham, P. Henderson and C. Keirnan. “*Estimating the dark figure of human trafficking and slavery victimisation in Australia*,” Australian Institute of Criminology, Canberra, ACT, Aust., Statistical Bull. 16, 2019. [Accessed: Nov. 30, 2020]. [Online]. Available: https://www.aic.gov.au/sites/default/files/2020-05/sb_human_trafficking_050219.pdf
- [46] K. Quinet, “Missing Persons,” *Problem-Specific Guides Ser. Problem-Oriented Guides Police*, vol. 66, Oct. 2012. [Online]. Available:
<https://cops.usdoj.gov/RIC/Publications/cops-p266-pub.pdf>
- [47] C. Weller. Evaporated people' could be disappearing from Japanese society by the thousands. Surry Hills, NSW, Aust.: Business Insider Australia, 2017. [Online]. Available: <https://www.businessinsider.com.au/evaporated-people-disappearing-from-japan-2017-4?r=US&IR=T>
- [48] E.W. Hickey. *Encyclopedia of Murder and Violent Crime*. Thousand Oaks, CA, USA.: Sage, 2013. [Online]. Available:
- [49] H. Parr and N. Fyfe, “Missing geographies,” *Progress in Human Geography*, vol. 37, no. 5, pp. 615–638, Dec. 2012. [Online]. Available:
<https://journals.sagepub.com/doi/pdf/10.1177/0309132512465919>
- [50] E. Bonny, L. Almond and P. Woolnough, “Adult missing persons: Can an investigative framework be generated using behavioural themes?,” *J. Investigative Psychol. Offender Profiling*, vol. 13, pp. 296–312, Jun. 2016. [Online]. Available:
<https://doi.org/10.1002/jip.1459>
- [51] M. Henderson, P. Henderson and C. Keirnan. “*Missing persons: Incidence, issues and impact*,” Australian Institute of Criminology, Canberra, ACT, Aust., Trends and Issues in Crime and Criminal Justice 144, 2000. [Accessed: Apr. 13, 2020]. [Online]. Available: https://www.researchgate.net/publication/260401235_Missing_Persons_Incidence_Issues_and_Impacts

- [52] G. Newiss, “Estimating the risk faced by missing persons: a study of homicide victims as an example of an outcome-based approach,” *Int. J. Police Science Manage*, vol. 6, no. 1, pp. 27–36, 2004. [Online]. Available: <https://doi.org/10.1350/ijps.6.1.27.34460>
- [53] L. Ferguson and W. Picknell, “Repeat or chronic?: Examining police data accuracy across the ‘history’ classifications of missing person cases,” *Int. J. Research Policy*, vol. 32, no. 5, pp. 680–694, 2021. [Online]. Available: <https://doi.org/10.1080/10439463.2021.1981899>
- [54] National Missing Persons Coordination Centre. “Why people go missing.” <https://www.missingpersons.gov.au/about/why-people-go-missing> (accessed Jan. 11, 2022).
- [55] N. García-Barceló, J. González-Alvarez, P. Woolnough and L. Almond, “Behavioural themes in Spanish missing persons cases: An empirical typology,” *J Investigative Psychol. Offender Profiling*, vol. 13, no. 3, pp. 349–364, Oct. 2020. [Online]. Available: <https://doi.org/10.1002/jip.1562>
- [56] Diagnostic and statistical manual of mental disorders, 5th Edition. Washington, DC, USA.: American Psychiatric Publishing, 2013ch. Neurocognitive Disorders, pp. 591–643. [Online]. Available: <https://doi.org/10.1176/appi.books.9780890425596>
- [57] S. Wayland. “*Acknowledging the empty space: A framework to enhance support of people left behind when someone is missing*,” Australian Federal Police, Canberra, ACT, Aust., 2019. [Accessed: Mar. 3, 2020]. [Online]. Available: <https://missingpersons.gov.au/sites/default/files/PDF%20-%20Publications/Counselling%20Framework-accessible2019.pdf>
- [58] National Missing Persons Coordination Centre. “About.” <https://missingpersons.gov.au/about> (accessed Oct. 27, 2020).
- [59] L. Mikšaj-Todorović and K. Butorac, “Evidence-based approach to missing persons investigation,” *J. Forensic Sciences Criminal Investigation*, vol. 5, no. 5, Oct. 2017. [Online]. Available: <https://doi.org/10.19080/JFSCI.2017.05.555673>
- [60] G. Gibb and P. Woolnough. “Missing persons: Understanding, planning, responding,” Grampian Police, Aberdeen, United Kingdom, 2007. [Accessed: Mar. 2, 2020]. [Online]. Available: <https://missingpersons.gov.au/sites/default/files/PDF%20-%20Publications/Research/International/Missing%20Persons%20Understanding%20Planning%20Respondi.pdf>
- [61] L. Ferguson, “Risk factors and missing persons: advancing an understanding of ‘risk’,” *Humanities, Social Sciences Communications*, vol. 9, no. 101, pp. 1–10,

- Mar. 2022. [Online]. Available: <https://www-tandfonline-com.elibrary.jcu.edu.au/doi/full/10.1080/00450618.2018.1466535>
- [62] “Missing children in the European Union. Mapping, data collection and statistics,” European Commission, Luxembourg, European Union, 2013. [Accessed: Jun. 18, 2020]. [Online]. Available: https://missingchildreneurope.eu/Portals/0/Docs/1709_missing_children_study_2013_en_original
- [63] E. Hall. National Missing Persons Coordination Centre. “RE: Research on long Term Missing Persons” Personal email (Jul. 3, 2020).
- [64] “National Missing Persons Framework Scotland,” The Scottish Government, Edinburgh, United Kingdom, 2017. [Accessed: May 6, 2020]. [Online]. Available: <https://www.gov.scot/publications/national-missing-persons-framework-scotland/>
- [65] K. Shalev-Greene. Centre for the Study of Missing Persons, University of Portsmouth. “Re: Research on long Term Missing Persons, Australia” Personal email (Apr. 25, 2020).
- [66] National Missing and Unidentified Persons System (NamUs). “Fw: [EXT] Information for Masters by Research” Personal email (Apr. 28, 2020).
- [67] K. Shalev-Greene, M. Schaefer and A. Schaefer, “Investigating missing person cases: How can we learn where they go or how far they travel?,” *Int. J. Police Sci. Manage*, vol. 11, no. 2, pp. 123–129, Jun. 2009. [Online]. Available: <https://doi.org/10.1350/ijps.2009.11.2.116>
- [68] S. Morewitz. “Missing Persons: Forensic Sociology Factors,” in *Handbook of missing persons*. Cham, Switzerland: Springer International Publishing, 2016, *ch. 8*, sec. 12, pp. 93–104. [Online]. Available: <https://arcabc.ca/islandora/object/ufv%3A336>
- [69] E. Stevenson and S. D. M. Thomas, “A 10 year follow-up study of young people reported missing to the police for the first time in 2005,” *J. Youth Stud.*, vol. 21, no. 10, pp. 1361–1375, Apr. 2018. [Online]. Available: <https://doi.org/10.1080/13676261.2018.1468874>
- [70] “*Missing people: A guide for family members and service providers*,” Families and Friends of Missing Persons Unit, Victims Services, NSW Department of Justice, Parramatta, NSW, Aust., Aug. 2014. [Accessed: Mar. 2, 2020]. [Online]. Available: https://www.missingpersons.justice.nsw.gov.au/Documents/book_missing-people.pdf
- [71] K. Shalev-Greene, C. Clarke, F. Pakes and L. Holmes, “People with dementia who go missing: A qualitative study of family caregivers decision to report incidents to

- the police,” *Policing: J. Policy Pract.*, vol. 12, no. 2, pp. 241–253, Jun. 2019. [Online]. Available: <https://doi.org/10.1093/police/paz007>
- [72] R. Chirgwin. “NSW Police to defend Mark43 lawsuit.” itnews. <https://www.itnews.com.au/news/nsw-police-to-defend-mark-43-lawsuit-585242> (accessed Oct. 3, 2022).
- [73] J. Hendry. “Tasmania's new core policing system goes live.” itnews. <https://www.itnews.com.au/news/tasmania-police-scores-46m-to-continue-core-systems-overhaul-555530> (accessed Oct. 3, 2022).
- [74] J. Hendry. “Tasmania Police scores \$46m to continue core systems overhaul.” itnews. <https://www.itnews.com.au/news/tasmania-police-scores-46m-to-continue-core-systems-overhaul-555530> (accessed Oct. 3, 2022).
- [75] M. Samways. To study missing persons cases with a focus on risk assessment models, investigation methods, missing persons procedures, and communication between law enforcement agencies and non-government organisations. Paramatta, NSW, Aust.: Churchill Trust, 2006. [Online]. Available: <https://churchilltrustapp.secure.force.com/api/services/apexrest/v1/image/?Id=0697F00000krd2uQAA&forceDownload=Yes>
- [76] Australian Bureau of Statistics, “Age Standard,” 2014. [Online]. Available: <https://www.abs.gov.au/statistics/standards/age-standard/latest-release#appendix-glossary>
- [77] S. Dartnall and J. Goodman–Delahunty, “The coronial investigation of suspected deaths: Prevalence and outcomes in New South Wales,” *J. Law Med.*, vol. 23, no. 3, pp. 609–627, Mar. 2016. [Online]. Available: https://www.researchgate.net/publication/298787939_The_Coronial_Investigation_of_Suspected_Deaths_Prevalence_and_Outcomes_in_NSW
- [78] National Missing Persons Coordination Centre. “About Us.” <https://www.missingpersons.gov.au/about-us> (accessed Jan. 21, 2021).
- [79] Australian Capital Courts. “Coroner’s Court.” <https://www.courts.act.gov.au/magistrates/law-and-practice/coroners-court> (accessed Jan. 15, 2022).
- [80] Coroners Court New South Wales. “Role of the Coroner.” <https://www.coroners.nsw.gov.au/coroners-court/how-the-coroners-court-work/role-of-the-coroner.html> (accessed Jan. 15, 2022).
- [81] Northern Territory Government information and services. “Coroner and inquests.” <https://www.coroners.nsw.gov.au/coroners-court/how-the-coroners-court-work/role-of-the-coroner.html> (accessed Jan. 15, 2022).

- [82] Queensland Courts. “Coronial investigations.” <https://www.courts.qld.gov.au/courts/coroners-court/coroners-process/coronial-investigations> (accessed Jan. 15, 2022).
- [83] Courts Administration Authority of South Australia. “Coroners Court.” <https://www.courts.sa.gov.au/download/the-coronial-process/?ind=1606717043489&filename=Coronial%20Process.pdf&wpdmdl=8752&refresh=61e245deadd3f1642218974> (accessed Jan. 15, 2022).
- [84] Magistrates Court of Tasmania. “Magistrates Court of Tasmania – Coronial Division.” https://www.magistratescourt.tas.gov.au/about_us/coroners (accessed Jan. 15, 2022).
- [85] Coroners Court of Victoria. “Death investigation process.” <https://www.coronerscourt.vic.gov.au/inquests-findings/investigation-process/death-investigation-process> (accessed Jan. 15, 2022).
- [86] Coroner’s Court of Western Australia. “Coroners Process.” https://www.coronerscourt.wa.gov.au/C/coroners_process.aspx (accessed Jan. 15, 2022).
- [87] Trove. “About.” <https://trove.nla.gov.au/about> (accessed Jan. 10, 2022).
- [88] Crime Stoppers. “About.” <https://www.acnc.gov.au/charity/charities?search=crime> (accessed Jan. 10, 2022).
- [89] Australian Bureau of Statistics, “*National, state and territory population,*” 2020. [Online]. Available: <https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/sep-2020>
- [90] Australian Bureau of Statistics, December 17, 2020. “31010do002_202006 National, state and territory population, Jun 2020 – Table 4 Mean age, by sex—at 30 June,” distributed by Australian Bureau of Statistics, <https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/latest-release>
- [91] Australia Government – Attorney-General’s Department, “*Australian Government Guidelines on the Recognition of Sex and Gender,*” 2020. [Online]. Available: <https://www.ag.gov.au/rights-and-protections/human-rights-and-anti-discrimination/australian-government-guidelines-recognition-sex-and-gender>
- [92] Australian Bureau of Statistics, “*1249.0 – Australian Standard Classification of Cultural and Ethnic Groups (ASCCEG), 2016,*” 2016. [Online]. Available: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1249.0Main+Features12016?OpenDocument>
- [93] M. Morton. National Missing Persons Coordination Centre. “RE: Research on long Term Missing Persons – Source document for the 2,600 figure” Personal email (Jan. 10, 2022).

- [94] National Missing Persons Coordination Centre. “Profiling.”
<https://www.missingpersons.gov.au/about/profiling> (accessed Jan. 17, 2022).
- [95] Australian Bureau of Statistics, March 28, 2017. “1249.0 Australian Standard Classification of Cultural and Ethnic Groups, 2016 – Table 1.2 Classification structure: Broad groups and narrow groups,” distributed by Australian Bureau of Statistics, <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/1249.02016?OpenDocument>
- [96] Australian Bureau of Statistics, March 28, 2017. “1249.0 Australian Standard Classification of Cultural and Ethnic Groups, 2016 – Table 1.3 Classification structure: Broad groups, narrow groups, and cultural and ethnic groups,” distributed by Australian Bureau of Statistics, <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/1249.02016?OpenDocument>
- [97] Australian Government, “Australian Public Holidays Dates Machine Readable Dataset,” 2022. [Online]. Available: <https://data.gov.au/dataset/ds-dga-b1bc6077-dadd-4f61-9f8c-002ab2cdff10/details?q=>
- [98] Australian Bureau of Statistics, “*Age Twenty years of population change*,” 2020. [Online]. Available: <https://www.abs.gov.au/articles/twenty-years-population-change>
- [99] Australian Bureau of Statistics, “*Standard for Sex, Gender, Variations of Sex Characteristics and Sexual Orientation Variables*,” 2021. [Online]. Available: <https://www.abs.gov.au/statistics/standards/standard-sex-gender-variations-sex-characteristics-and-sexual-orientation-variables/2020>
- [100] Australian Bureau of Statistics, “*Standard for Sex and Gender Variables*,” 2016. [Online]. Available: <https://www.abs.gov.au/statistics/standards/standard-sex-gender-variations-sex-characteristics-and-sexual-orientation-variables/2016>
- [101] Australian Bureau of Statistics, “*Australian Standard Classification of Cultural and Ethnic Groups (ASCCEG)*,” 2019. [Online]. Available: <https://www.abs.gov.au/statistics/classifications/australian-standard-classification-cultural-and-ethnic-groups-ascecg/latest-release>
- [102] Australian Bureau of Statistics, March 28, 2017. “1249.0 Australian Standard Classification of Cultural and Ethnic Groups, 2016 – Table 2 Supplementary codes,” distributed by Australian Bureau of Statistics, <https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/latest-release>
- [103] Australian Bureau of Statistics, July 20, 2017. “2071.0 – Census of Population and Housing: Reflecting Australia – Stories from the Census, 2016 – Cultural Diversity – Table 5. Ancestry by State and Territory of Usual Residence, Count of persons –

- 2016(a)(b),” distributed by Australian Bureau of Statistics, <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/2071.02016?OpenDocument>
- [104] Australian Government – Bureau of Meteorology, “*Average annual and monthly maximum, minimum, and mean temperature*,” 2016. [Online]. Available: http://www.bom.gov.au/jsp/ncc/climate_averages/temperature/index.jsp?maptype=1&period=sum#maps
- [105] Australian Bureau of Statistics, “*Cultural diversity: Census Information on country of birth, year of arrival, ancestry, language and religion*,” 2021. [Online]. Available: <https://www.abs.gov.au/statistics/people/people-and-communities/cultural-diversity-census/latest-release>
- [106] “*Business Plan 2019–20*,” ANZPAA, Docklands, VIC, Aust., 2019. [Accessed: May 19, 2022]. [Online]. Available: <https://www.anzpaa.org.au/ArticleDocuments/187/ANZPAA%20-%20Business%20Plan%202019-20.pdf.aspx>
- [107] “*ANZPAA Annual Report 2019–20*,” ANZPAA, Docklands, VIC, Aust., 2019. [Accessed: May 19, 2022]. [Online]. Available: <https://www.anzpaa.org.au/ArticleDocuments/188/ANZPAA%20-%20Annual%20Report%202018-19.pdf.aspx>
- [108] Australian Government – Federal Register of Legislation, “*Freedom of Information, 1982*,” 2012. [Online]. Available: <https://www.legislation.gov.au/Details/C2012C00231>
- [109] State Government of Victoria – Victorian Legislation, “*Victorian Freedom of Information Act 1982, Act Number 9859/1982, Version 110*,” 2012. [Online]. Available: <https://www.legislation.vic.gov.au/in-force/acts/freedom-information-act-1982/110>
- [110] “Royal Commission into violence, abuse, neglect and exploitation of people with disability – Police responses to people with disabilities,” Royal Commission into violence, abuse, neglect and exploitation of people with disability, Aust., 2021. [Accessed: Jun. 21, 2022]. [Online]. Available: <https://disability.royalcommission.gov.au/system/files/2021-10/Research%20Report%20-%20Police%20responses%20to%20people%20with%20disability.pdf>
- [111] “*Submission to productivity Commission’s inquiry into data availability and use*,” Australian Criminal Intelligence Commission, Canberra, ACT, Aust., Sep. 2016. [Accessed: May 19, 2022]. [Online]. Available: <https://www.pc.gov.au/inquiries/completed/data-access/report/data-access-overview.pdf>

- [112] “*The Australian Government’s response to the Productivity Commission data availability and use inquiry*,” Department of the Prime Minister and Cabinet, Canberra, ACT, Aust, 2018. [Accessed: May. 19, 2022]. [Online]. Available: <https://dataavailability.pmc.gov.au/sites/default/files/govt-response-pc-dau-inquiry.pdf>
- [113] National Missing Persons Coordination Centre. “Myths and facts.” <https://www.missingpersons.gov.au/about/myths-and-facts> (accessed Jan. 21, 2021).

APPENDIX A Additional identified characteristics

| Additional LTMP characteristics/information | | |
|---|---|---|
| General | Characteristics | Medical |
| Missing since date (day/month/year) | DOB (day/month/year) | Has a medical condition |
| ALT – Missing since date (day/month/year) | Age in years, as at 19 May 2020 | What is the medical condition |
| Reported missing date (day/month/year) | Gender | Medical condition impacts lifestyle |
| Calculated age went missing (in years or part–there–of) | Reported gender | Has a physical impairment |
| Address last seen | Height (cm) | What is the physical impairment |
| State/Territory last seen | ALT – Height (cm) | Physical conditions impact lifestyle |
| Postcode last seen | Build | Has a cognitive impairment condition |
| Date last seen (day/month/year) | ALT – Build | What is the cognitive impairment |
| ALT – Date last seen (day/month/year) | Hair Colour | Cognitive impairment impacts lifestyle |
| Time last seen (hh:mm am/pm) | ALT – Hair Colour | Requires medication |
| Missing from jurisdiction | Eye Colour | Uses a medical device |
| ALT – Address/location last seen | ALT – Eye Colour | What type of medical device |
| Type of area missing in | Complexion | Family and Relationship |
| Who reported them missing | ALT – Complexion | Relationship status |
| Last seen by | Ethnicity | Has children |
| Time missing before reported missing (in years) | ALT – Ethnicity | How many children |
| Responsible jurisdiction | Distinguishing features | Family dysfunctional |
| Age reported went missing (in years or part–there–of) | ALT – Distinguishing features | Type of family dysfunction, one or more |
| Has known aliases | Home address (location, state/territory/postcode) | Citizenship |
| How many known aliases | Lived/lives with | Nationality |
| Vehicle – At Time of Disappearance | Has tattoo/s | First language English |
| Last seen operating a vehicle | Wears glasses | What is the first language |
| Vehicle type | Wears contact lens | Level can speak English |
| Vehicle model (brand name i.e., Ford) Ford) | Activity at time of disappearance | Australian Resident |
| Vehicle make (specific name i.e., Escape) Escape) | Interests | Born in Australia |
| Vehicle colour | Last activity seen doing | Year arrived in Australia |
| Vehicle year | Sexual orientation | Has family in Australia |
| Last seen with vehicle including caravan | Animals | Country of birth |
| Vehicle – Found | Missing with pet | Left Australia |
| Vehicle found | Type of pet/animal went missing with | Financial |
| Vehicle found by | Items | Has accessed Centrelink |
| Date vehicle found (day/month/year) | Believed to be wearing | Has accessed Medicare |
| Location vehicle found | Phone located | Has accessed finances |
| Vehicle locked | Tablet located | Employment |
| Vehicle operational when found | Wallet/Handbag located | Employment status |
| Vehicle was in an accident | House/Car keys located | Employer |
| The severity of the accident | Other | Employed as |
| | Location coordinates (if no postcode) | Education |
| | | Education status |
| | | Student type |
| | | Known education qualification |

| Additional LTMP characteristics/information (cont.) | | |
|---|---|---|
| Disappearance Details | Located Details | Coroner |
| Air search done | Missing person located | Coronial Investigation |
| Land search done | Date located (day/month/year) | Coroner's original report located |
| Ocean search done | Found at location | Coroner's report number |
| Underwater search done | Located alive/deceased | Coroner findings |
| Search dog/s used | Person responsible for disappearance | Coroner's report format i.e., paper/URL |
| Suicide note | Association to person responsible for disappearance | Coroner's report date |
| Went missing with others | Were those who went missing with LTMP located | Coroner's feedback on investigation |
| How many others went missing with this LTMP | Number of other persons located | Other |
| Person one or more missing with LTMP | Pet/s found one or more | Location coordinates (if no postcode) |
| Disappearance out of character | Which pet/s found | |
| Suspicious disappearance | | |
| Suspected cause of disappearance | | |
| Associated with another who is connected to other MP case/s | | |
| Relationship to the person associated with other MP case/s | | |
| Gender of person associated with other MP case/s | | |
| Long-term missing person reported by person associated with other missing person case/s | | |
| Associated person charged with other missing person case/s | | |
| Associated person convicted with other MP case/s | | |
| Has criminal associations | | |
| Type of criminal association | | |
| Long-term missing person is a known criminal | | |
| Type of criminal activity known to have done | | |
| Drug user | | |
| Type of drugs taken | | |
| Reward offered | | |
| Reward amount | | |

APPENDIX B Exact DOB

| Long-term missing person identified as having an exact birth date (Identified Day, month and year of birth – example Day/Month/Year) | | | | | |
|---|----------|------------|------------|------------|-------------|
| Age (approx.) | 2 (days) | 2 (months) | 6 (months) | 7 (months) | 11 (months) |
| 0 – <1 | 1 | 1 | 1 | 1 | 1 |
| Age (years) | 1 | 1.5 | 2 | 3 | 4 |
| 1 – <5 | 1 | 1 | 2 | 2 | 2 |
| Age (years) | 5 | 6 | 7 | 8 | 9 |
| 5 – <10 | 1 | 1 | 2 | 2 | 5 |
| Age (years) | 10 | 11 | 12 | 13 | 14 |
| 10 – <15 | 6 | 3 | 6 | 5 | 10 |
| Age (years) | 15 | 16 | 17 | 18 | 19 |
| 15 – <20 | 14 | 20 | 11 | 22 | 16 |
| Age (years) | 20 | 21 | 22 | 23 | 24 |
| 20 – <25 | 20 | 27 | 22 | 23 | 24 |
| Age (years) | 25 | 26 | 27 | 28 | 29 |
| 25 – <30 | 23 | 22 | 19 | 24 | 18 |
| Age (years) | 30 | 31 | 32 | 33 | 34 |
| 30 – <35 | 24 | 26 | 20 | 24 | 22 |
| Age (years) | 35 | 36 | 37 | 38 | 39 |
| 35 – <40 | 22 | 12 | 21 | 18 | 22 |
| Age (years) | 40 | 41 | 42 | 43 | 44 |
| 40 – <45 | 16 | 14 | 18 | 11 | 11 |
| Age (years) | 45 | 46 | 47 | 48 | 49 |
| 45 – <50 | 13 | 19 | 10 | 11 | 14 |
| Age (years) | 50 | 51 | 52 | 53 | 54 |
| 50 – <55 | 11 | 11 | 12 | 12 | 7 |
| Age (years) | 55 | 56 | 57 | 58 | 59 |
| 55 – <60 | 6 | 9 | 9 | 8 | 6 |
| Age (years) | 60 | 61 | 62 | 63 | 64 |
| 60 – <65 | 8 | 9 | 5 | 6 | 3 |
| Age (years) | 65 | 66 | 67 | 68 | 69 |
| 65 – <70 | 5 | 5 | 1 | 7 | 4 |
| Age (years) | 70 | 71 | 72 | 73 | 74 |
| 70 – <75 | 4 | 5 | 3 | 5 | 2 |
| Age (years) | 75 | 76 | 77 | 78 | 79 |
| 75 – <80 | 2 | 9 | 1 | 1 | 5 |
| Age (years) | 80 | 81 | 82 | 83 | 84 |
| 80 – <85 | | 3 | | | 3 |
| Age (years) | 85 | 86 | 87 | 88 | 89 |
| 85 – <90 | | | | 2 | 1 |
| Age (years) | 90 | 91 | 92 | 93 | 94 |
| 90 – <95 | | 1 | | | |

APPENDIX C Month and year only DOB

| Long-term missing person identified as having a month and year only (1 and Identified Month and Year of Birth – Example 1/Month/Year) | | | | | |
|--|----------|----|----|----|----|
| Age (years) | 2 (days) | 1 | 2 | 3 | 4 |
| 0 – <5 | 1 | | | | |
| Age (years) | 15 | 16 | 17 | 18 | 19 |
| 15 – <20 | | | | 1 | 1 |
| Age (years) | 20 | 21 | 22 | 23 | 24 |
| 20 – <25 | 1 | | | | |
| Age (years) | 25 | 26 | 27 | 28 | 29 |
| 25 – <30 | | | | 1 | |
| Age (years) | 30 | 31 | 32 | 33 | 34 |
| 30 – <35 | 1 | | | 1 | |
| Age (years) | 35 | 36 | 37 | 38 | 39 |
| 35 – <40 | | | 1 | | |
| Age (years) | 45 | 46 | 47 | 48 | 49 |
| 45 – <50 | 1 | 1 | | | |
| Age (years) | 75 | 76 | 77 | 78 | 79 |
| 75 – <60 | | 1 | | | |

APPENDIX D Year only DOB

| Long-term missing person identified as having a year only (1 January and Identified Year of Birth – Example – 1/1/Year) | | | | | |
|--|----|----|----|----|----|
| Age (years) | 0 | 1 | 2 | 3 | 4 |
| 0 – <5 | | 1 | 1 | | 2 |
| Age (years) | 5 | 6 | 7 | 8 | 9 |
| 5 – <10 | 1 | | | 1 | 1 |
| Age (years) | 10 | 11 | 12 | 13 | 14 |
| 10 – <15 | 2 | 1 | 2 | | 4 |
| Age (years) | 15 | 16 | 17 | 18 | 19 |
| 15 – <20 | 3 | 4 | 2 | 4 | 7 |
| Age (years) | 20 | 21 | 22 | 23 | 24 |
| 20 – <25 | 5 | 7 | 7 | 7 | 8 |
| Age (years) | 25 | 26 | 27 | 28 | 29 |
| 25 – <30 | 8 | 4 | 11 | 8 | 10 |
| Age (years) | 30 | 31 | 32 | 33 | 34 |
| 30 – <35 | 10 | 14 | 8 | 8 | 12 |
| Age (years) | 35 | 36 | 37 | 38 | 39 |
| 35 – <40 | 12 | 7 | 8 | 9 | 11 |
| Age (years) | 40 | 41 | 42 | 43 | 44 |
| 40 – <45 | 12 | 7 | 5 | 10 | 3 |
| Age (years) | 45 | 46 | 47 | 48 | 49 |
| 45 – <50 | 7 | 10 | 5 | 7 | 8 |
| Age (years) | 50 | 51 | 52 | 53 | 54 |
| 50 – <55 | 3 | 10 | 7 | 6 | 5 |
| Age (years) | 55 | 56 | 57 | 58 | 59 |
| 55 – <60 | 7 | 4 | 5 | 3 | 7 |
| Age (years) | 60 | 61 | 62 | 63 | 64 |
| 60 – <65 | 5 | 2 | 7 | 7 | 1 |
| Age (years) | 65 | 66 | 67 | 68 | 69 |
| 65 – <70 | 4 | 1 | 4 | 5 | 1 |
| Age (years) | 70 | 71 | 72 | 73 | 74 |
| 70 – <75 | 2 | 4 | 4 | 2 | 3 |
| Age (years) | 75 | 76 | 77 | 78 | 79 |
| 75 – <80 | 2 | 1 | 3 | 1 | 3 |
| Age (years) | 80 | 81 | 82 | 83 | 84 |
| 80 – <85 | 3 | | 1 | 1 | 3 |
| Age (years) | 85 | 86 | 87 | 88 | 89 |
| 85 – <90 | | | | 2 | |

APPENDIX E Reported Age

| Long-term missing person reported age | | | | | |
|---------------------------------------|-----------|------------|------------|------------|-------------|
| Age (approx.) | 2 (days) | 2 (months) | 6 (months) | 7 (months) | 11 (months) |
| 0 – <1 | 1 | 1 | 1 | 1 | 1 |
| Age (years) | 1 | 2 | 3 | 4 | 5 |
| 1 – <5 | 1 | 1 | 2 | 2 | 2 |
| Age (years) | 5 | 6 | 7 | 8 | 9 |
| 5 – <10 | 1 | 1 | 2 | 2 | 5 |
| Age (years) | 10 | 11 | 12 | 13 | 14 |
| 10 – <15 | 6 | 3 | 6 | 5 | 10 |
| Age (years) | 15 | 16 | 17 | 18 | 19 |
| 15 – <20 | 14 | 20 | 11 | 22 | 16 |
| Age (years) | 20 | 21 | 22 | 23 | 24 |
| 20 – <25 | 20 | 27 | 22 | 23 | 24 |
| Age (years) | 25 | 26 | 27 | 28 | 29 |
| 25 – <30 | 23 | 22 | 19 | 24 | 18 |
| Age | 30 | 31 | 32 | 33 | 34 |
| 30 – <35 | 24 | 26 | 20 | 24 | 22 |
| Age (years) | 35 | 36 | 37 | 38 | 39 |
| 35 – <40 | 22 | 12 | 21 | 18 | 22 |
| Age (years) | 40 | 41 | 42 | 43 | 44 |
| 40 – <45 | 16 | 14 | 18 | 11 | 11 |
| Age (years) | 45 | 46 | 47 | 48 | 49 |
| 45 – <50 | 13 | 19 | 10 | 11 | 14 |
| Age (years) | 50 | 51 | 52 | 53 | 54 |
| 50 – <55 | 11 | 11 | 12 | 12 | 7 |
| Age (years) | 55 | 56 | 57 | 58 | 59 |
| 55 – <60 | 6 | 9 | 9 | 8 | 6 |
| Age (years) | 60 | 61 | 62 | 63 | 64 |
| 60 – <65 | 8 | 9 | 5 | 6 | 3 |
| Age (years) | 65 | 66 | 67 | 68 | 69 |
| 65 – <70 | 5 | 5 | 1 | 7 | 4 |
| Age (years) | 70 | 71 | 72 | 73 | 74 |
| 70 – <75 | 4 | 5 | 3 | 5 | 2 |
| Age (years) | 75 | 76 | 77 | 78 | 79 |
| 75 – <80 | 2 | 9 | 1 | 1 | 5 |
| Age (years) | 80 | 81 | 82 | 83 | 84 |
| 80 – <85 | | 3 | | | 3 |
| Age (years) | 85 | 86 | 87 | 88 | 89 |
| 85 – <90 | | | | 2 | 1 |
| Age (years) | 90 | 91 | 92 | 93 | 94 |
| 90 – <95 | | 1 | | | |

APPENDIX F Ethnicity determination

| Information searched to identify ethnicity | How used to determine ethnicity of LTMP | Additional information searched |
|--|--|--|
| Image/s | <p>If listed as dark, brown, or black, any images located were assessed to identify if the LTMP appeared to be of indigenous heritage. Any additional information shown in the images background were also included in the assessment, background i.e., Aboriginal community, landscape, buildings with names, education facilities.</p> <p>If images had a name of a location shown, caption that identified they had travelled to, visited, would like to visit the town, city and/or country of their parents or other family members and/or showed names of family members or friends.</p> <p>If images showed an award being given to the LTMP individually or part of group and listed the award name and/or gave detail about an award or commendation.</p> | <p>Locations Family Friends Awards etc</p> |
| Name | <p>The name was searched to identify friends and family of the LTMP. Often a family member or a friend's Ethnicity was identified and/or the location they resided including that of the LTMP, or they listed the location the LTMP usually resided or was known to travelled between.</p> <p>The origin of the LTMP. This information provided details on the location where a person's name was most common.</p> <p>Alternate spelling or alias of the LTMP. This often would provide other news stories or articles about the LTMP and included family and friends</p> | <p>Family Friends Locations</p> |
| Location | <p>Carried out a search on the location the LTMP was last seen or reported missing from. This provided information on the region and its residents, articles of importance to the area, and family and/or friends discussing the LTMP.</p> | <p>Location Family Friends</p> |
| Family | <p>Searching on family and/or friends provided information in relation to ancestry history and/or funeral notices. Online archived newspaper stories, citizenship details and funeral notices, including cemetery information were also search. This provided a reverse cross checking of LTMP's name, i.e., family to LTMP, which provided an ethnicity continuum. Descendants were also searched if any could be identified.</p> | <p>Family Friends Citizenship Location</p> |
| Articles | <p>Identifying publications where the details of the LTMP had been published. Some publications were ethnic community specific. Additionally, some articles were published in a particular language, which provided additional information about the LTMP.</p> | <p>Publications Google translate</p> |
| Awards and/or events attended | <p>Articles were located about a LTMP receiving an award, or participating in an event i.e., race, or attending a formal/community event. This may include industries/trades/art exhibitions currently or previously work in or shown.</p> | <p>Award Event Location Family Friends Industries Trades Exhibitions</p> |

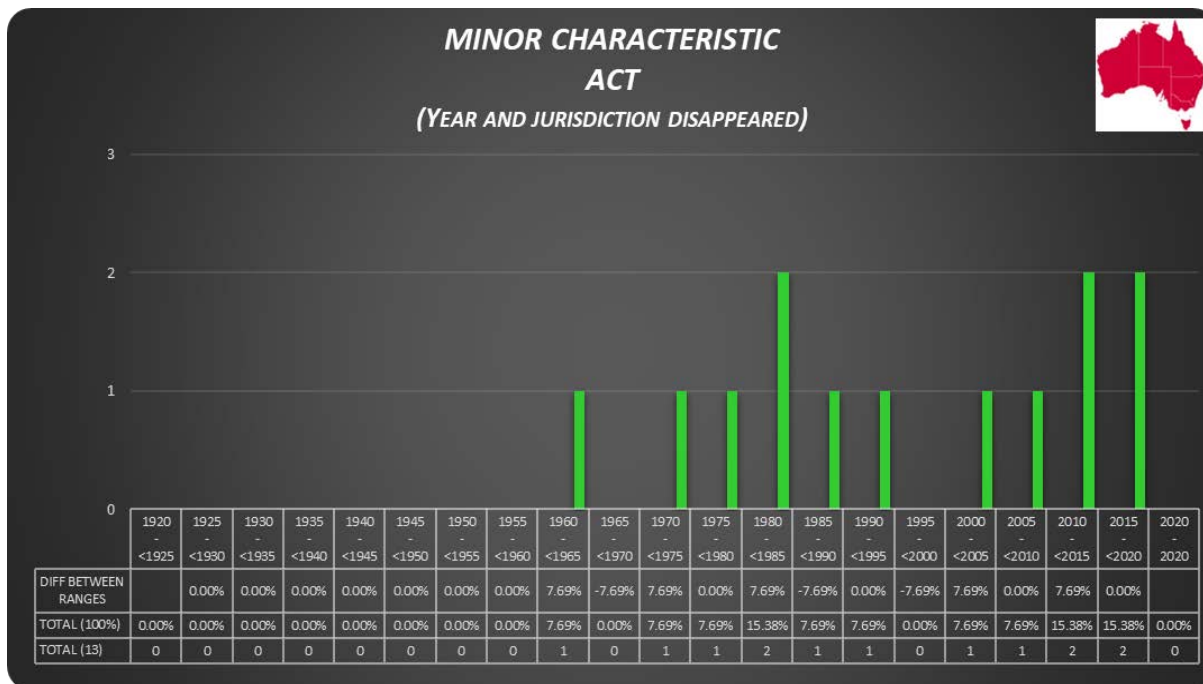
APPENDIX G Long-term missing person ethnicity matched to ABS ASCCEG category

| Identified Ethnicity | Matched to ABS ASCCEG Category | Identified Ethnicity | Matched to ABS ASCCEG Category |
|---------------------------|--------------------------------|----------------------------|---------------------------------------|
| American | American | Italian | Italian |
| Arab | Arab, nfd | Japanese | Japanese |
| Asian | Asian, so described | Kenya | Kenyan |
| Assyrian | Assyrian | Korea | Korean |
| Australian Peoples | Australian Peoples, nfd | Malaysian | Malay |
| Austria | Austrian | Malta | Maltese |
| Bangladesh | Bangladeshi | Maltese | Maltese |
| Belgium | Belgian | Mediterranean | Greek |
| British | British, nfd | Middle Eastern | North African and Middle Eastern, nfd |
| Burmese | Burmese | Nepalese | Nepalese |
| Cambodian/Laos | Khmer (Cambodian) | New Zealand Peoples | New Zealand Peoples, nfd |
| Canadian | Canadian | Pacific Islander | Polynesian, nfd |
| Caucasian | Caucasian, so described | Pakistan | Pakistani |
| Chinese | Chinese | Papua New Guinean | Papua New Guinean |
| Czechoslovakian | Czech | Polish | Polish |
| Dutch | Dutch | Portuguese | Portuguese |
| East Asian | Asian, so described | Russian | Russian |
| Eastern European | Eastern European, nfd | Serbian | Serbian |
| El Salvador | Central American, nfd | Slovakian | Slovak |
| England | British, nfd | South Africa | South African |
| Eritrea | Eritrean | South-East Asian | South-East Asian, nfd |
| Ethiopia | Ethiopian | Southern European | Italian |
| Fijian Indian | Fijian Indian | Sri Lankan | Sri Lankan |
| Filipino | Filipino | Sudanese | Sudanese |
| French | French | Swedish | Swedish |
| German | German | Taiwanese | Taiwanese |
| Greek | Greek | Thai | Thai |
| Hungarian | Hungarian | Tongan | Tongan |
| Indian | Indian | Turkey | Turkish |
| Indonesian | Indonesian | Vietnamese | Vietnamese |
| Irish | Irish | Yugoslavian | Southern European, nfd |

APPENDIX H Year disappeared for all LTMPs in study

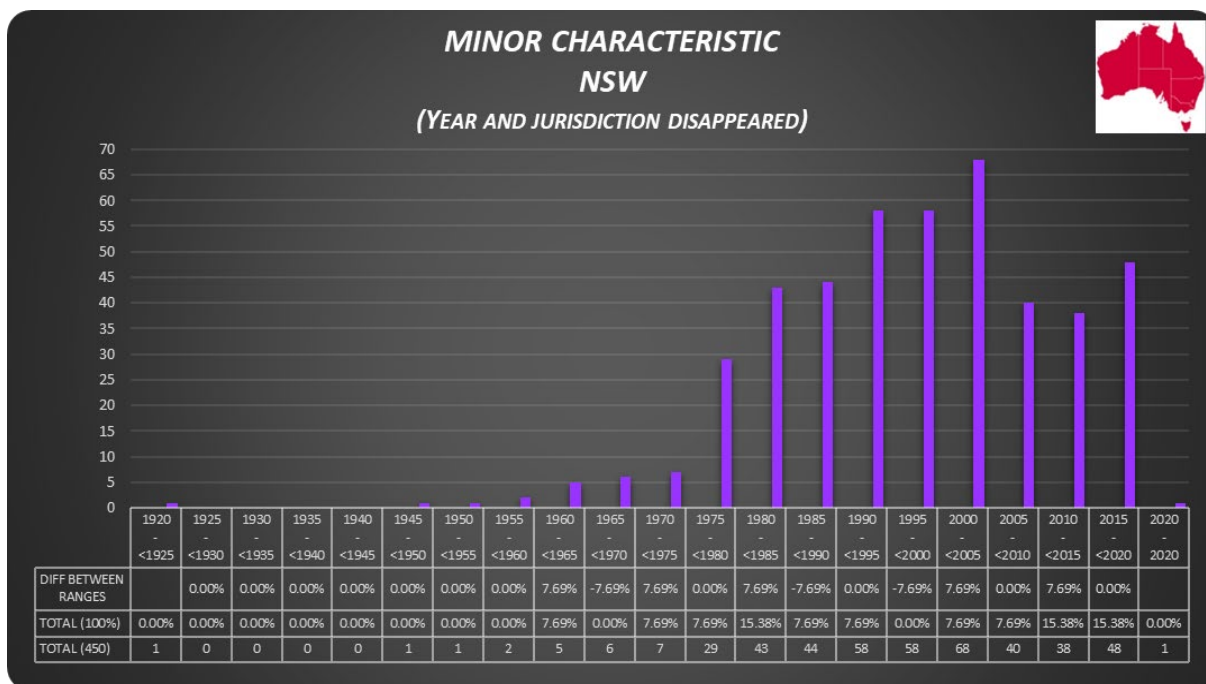
| All LTMPs Year Disappeared 1 January 1920 To 19 May2020 | | | | | |
|--|------|------|------|------|------|
| Year | 1920 | 1921 | 1922 | 1923 | 1924 |
| 1920 – <1925 | 1 | | | | |
| Years | 1925 | 1926 | 1927 | 1928 | 1929 |
| 1925 – <1930 | | | | | |
| Years | 1930 | 1931 | 1932 | 1933 | 1934 |
| 1930 – <1935 | | | | | |
| Years | 1935 | 1936 | 1937 | 1938 | 1939 |
| 1935 – <1940 | | | | 1 | |
| Years | 1940 | 1941 | 1942 | 1943 | 1944 |
| 1940 – <1945 | | | | | |
| Years | 1945 | 1946 | 1947 | 1948 | 1949 |
| 1945 – <1950 | 1 | | | | |
| Years | 1950 | 1951 | 1952 | 1953 | 1954 |
| 1950 – <1955 | | | 1 | 1 | |
| Years | 1955 | 1956 | 1957 | 1958 | 1959 |
| 1955 – <1960 | | | | 3 | 3 |
| Years | 1960 | 1961 | 1962 | 1963 | 1964 |
| 1960 – <1965 | 1 | | 2 | 2 | 3 |
| Years | 1965 | 1966 | 1967 | 1968 | 1969 |
| 1965 – <1970 | 1 | 5 | 3 | 4 | 6 |
| Years | 1970 | 1971 | 1972 | 1973 | 1974 |
| 1970 – <1975 | 5 | 1 | 8 | 9 | 11 |
| Years | 1975 | 1976 | 1977 | 1978 | 1979 |
| 1975 – <1980 | 13 | 8 | 7 | 14 | 14 |
| Years | 1980 | 1981 | 1982 | 1983 | 1984 |
| 1980 – <1985 | 20 | 10 | 10 | 15 | 23 |
| Years | 1985 | 1986 | 1987 | 1988 | 1989 |
| 1985 – <1990 | 16 | 16 | 21 | 15 | 19 |
| Years | 1990 | 1991 | 1992 | 1993 | 1994 |
| 1990 – <1995 | 20 | 19 | 24 | 32 | 20 |
| Years | 1995 | 1996 | 1997 | 1998 | 1999 |
| 1995 – <2000 | 29 | 28 | 26 | 31 | 22 |
| Years | 2000 | 2001 | 2002 | 2003 | 2004 |
| 2000 – <2005 | 23 | 22 | 29 | 24 | 27 |
| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| 2005 – <2010 | 35 | 20 | 22 | 26 | 20 |
| Years | 2010 | 2011 | 2012 | 2013 | 2014 |
| 2010 – <2015 | 26 | 19 | 33 | 29 | 28 |
| Years | 2015 | 2016 | 2017 | 2018 | 2019 |
| 2015 – <2020 | 31 | 24 | 22 | 16 | 19 |
| Years | 2020 | | | | |
| 2020 – 2020 | 4 | | | | |

APPENDIX I ACT – Year and jurisdiction disappeared



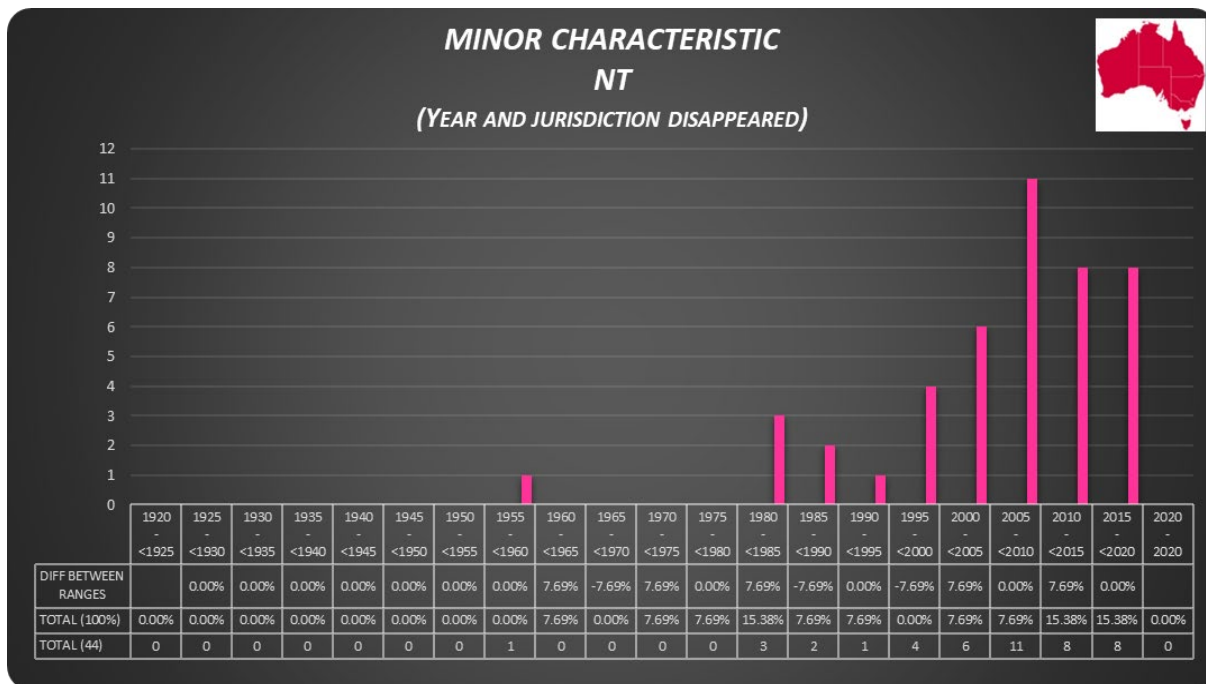
| ACT LTMPs Year Disappeared 1 January 1920 to 19 May 2020 | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|
| Years | 1960 | 1961 | 1962 | 1963 | 1964 |
| 1960 – <1965 | 1 | | | | |
| Years | 1970 | 1971 | 1972 | 1973 | 1974 |
| 1970 – <1975 | | | | | 1 |
| Years | 1975 | 1976 | 1977 | 1978 | 1979 |
| 1975 – <1980 | 1 | | | | |
| Years | 1980 | 1981 | 1982 | 1983 | 1984 |
| 1980 – <1985 | 1 | | | | 1 |
| Years | 1985 | 1986 | 1987 | 1988 | 1989 |
| 1985 – <1990 | | | 1 | | |
| Years | 1990 | 1991 | 1992 | 1993 | 1994 |
| 1990 – <1995 | | | 1 | | |
| Years | 2000 | 2001 | 2002 | 2003 | 2004 |
| 2000 – <2005 | | | | | 1 |
| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| 2005 – <2010 | | | | 1 | |
| Years | 2010 | 2011 | 2012 | 2013 | 2014 |
| 2010 – <2015 | | | 1 | 1 | |
| Years | 2015 | 2016 | 2017 | 2018 | 2019 |
| 2015 – <2020 | 1 | | 1 | | |

APPENDIX J NSW – Year and jurisdiction disappeared



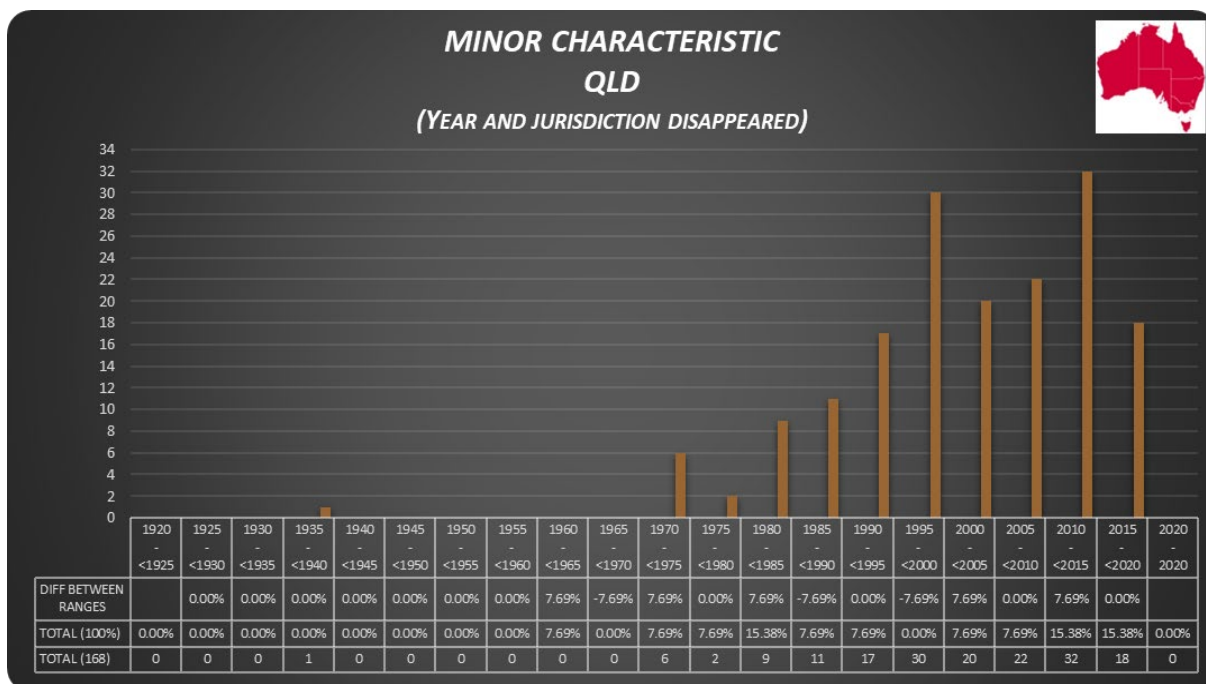
| NSW LTMPs Year Disappeared 1 January 1920 to 19 May 2020 | | | | | |
|---|------|------|------|------|------|
| Year | 1920 | 1921 | 1922 | 1923 | 1924 |
| 1920 – <1925 | 1 | | | | |
| Years | 1945 | 1946 | 1947 | 1948 | 1949 |
| 1945 – <1950 | 1 | | | | |
| Years | 1950 | 1951 | 1952 | 1953 | 1954 |
| 1950 – <1955 | | | 1 | | |
| Years | 1955 | 1956 | 1957 | 1958 | 1959 |
| 1955 – <1960 | | | | 1 | 1 |
| Years | 1960 | 1961 | 1962 | 1963 | 1964 |
| 1960 – <1965 | | | 1 | 2 | 2 |
| Years | 1965 | 1966 | 1967 | 1968 | 1969 |
| 1965 – <1970 | 1 | 2 | 1 | 1 | 1 |
| Years | 1970 | 1971 | 1972 | 1973 | 1974 |
| 1970 – <1975 | 1 | 1 | 1 | 3 | 1 |
| Years | 1975 | 1976 | 1977 | 1978 | 1979 |
| 1975 – <1980 | 5 | 1 | 4 | 8 | 11 |
| Years | 1980 | 1981 | 1982 | 1983 | 1984 |
| 1980 – <1985 | 11 | 8 | 6 | 8 | 10 |
| Years | 1985 | 1986 | 1987 | 1988 | 1989 |
| 1985 – <1990 | 9 | 8 | 8 | 7 | 12 |
| Years | 1990 | 1991 | 1992 | 1993 | 1994 |
| 1990 – <1995 | 12 | 10 | 7 | 19 | 10 |
| Years | 1995 | 1996 | 1997 | 1998 | 1999 |
| 1995 – <2000 | 15 | 11 | 13 | 11 | 8 |
| Years | 2000 | 2001 | 2002 | 2003 | 2004 |
| 2000 – <2005 | 11 | 14 | 19 | 9 | 15 |
| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| 2005 – <2010 | 14 | 3 | 7 | 8 | 8 |
| Years | 2010 | 2011 | 2012 | 2013 | 2014 |
| 2010 – <2015 | 7 | 5 | 9 | 6 | 11 |
| Years | 2015 | 2016 | 2017 | 2018 | 2019 |
| 2015 – <2020 | 11 | 11 | 11 | 7 | 8 |
| Years | 2020 | | | | |
| 2020 – 2020 | 1 | | | | |

APPENDIX K NT – Year and jurisdiction disappeared



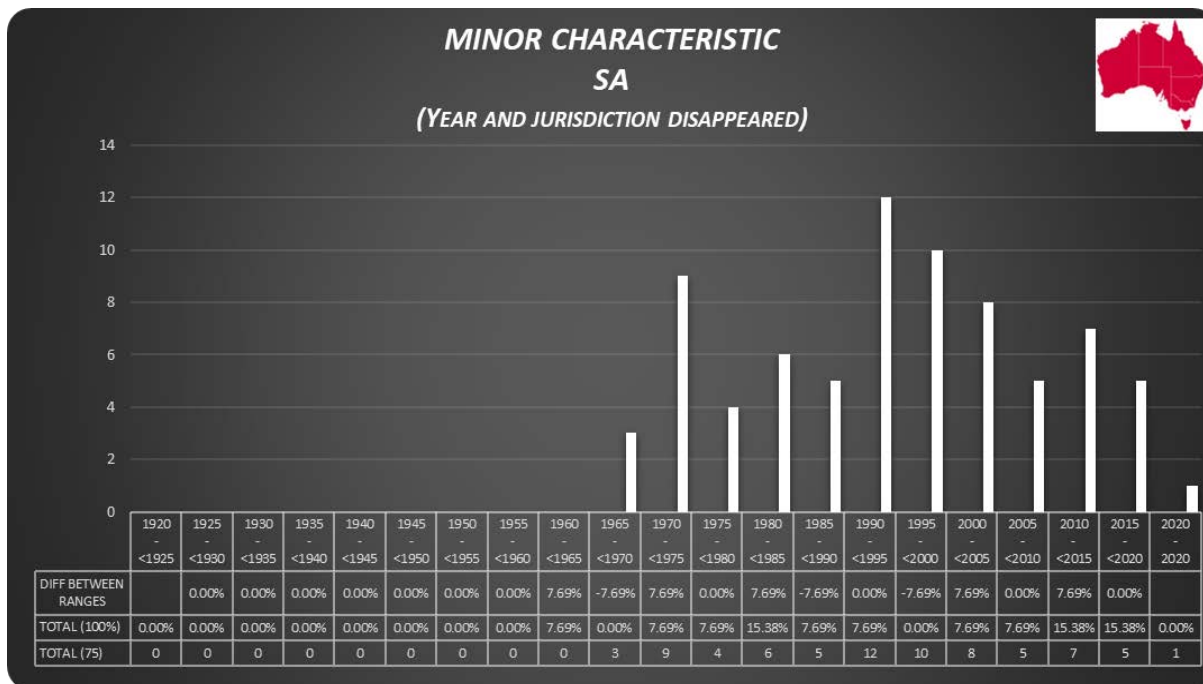
| NT LTMPs Year Disappeared 1 January 1920 to 19 May 2020 | | | | | |
|--|------|------|------|------|------|
| Years | 1955 | 1956 | 1957 | 1958 | 1959 |
| 1955 – <1960 | | | | | 1 |
| Years | 1980 | 1981 | 1982 | 1983 | 1984 |
| 1980 – <1985 | 2 | | 1 | | |
| Years | 1985 | 1986 | 1987 | 1988 | 1989 |
| 1985 – <1990 | | 1 | | 1 | |
| Years | 1990 | 1991 | 1992 | 1993 | 1994 |
| 1990 – <1995 | | | | | 1 |
| Years | 1995 | 1996 | 1997 | 1998 | 1999 |
| 1995 – <2000 | 2 | 1 | | | 1 |
| Years | 2000 | 2001 | 2002 | 2003 | 2004 |
| 2000 – <2005 | 2 | 1 | | | 3 |
| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| 2005 – <2010 | 2 | 3 | 3 | 1 | 2 |
| Years | 2010 | 2011 | 2012 | 2013 | 2014 |
| 2010 – <2015 | | 3 | 2 | 1 | 2 |
| Years | 2015 | 2016 | 2017 | 2018 | 2019 |
| 2015 – <2020 | 2 | 1 | 2 | 1 | 2 |

APPENDIX L QLD – Year and jurisdiction disappeared



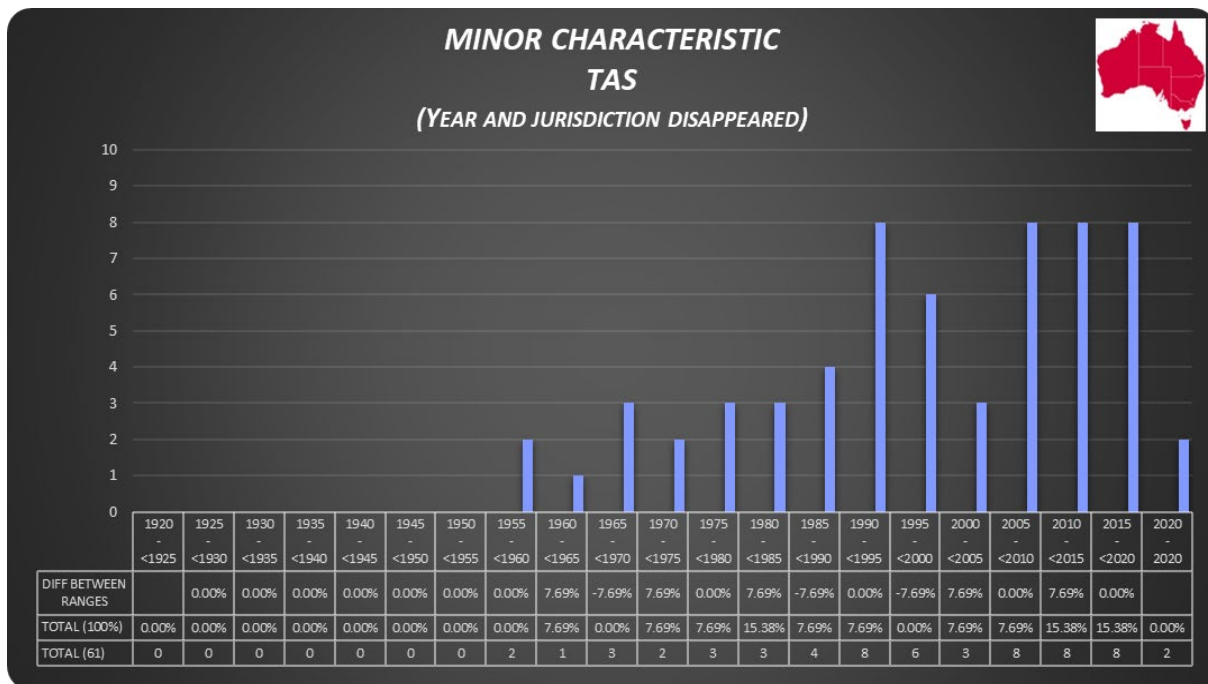
| QLD LTMPs Year Disappeared 1 January 1920 to 19 May 2020 | | | | | |
|---|------|------|------|------|------|
| Years | 1935 | 1936 | 1937 | 1938 | 1939 |
| 1935 – <1940 | | | | 1 | |
| Years | 1970 | 1971 | 1972 | 1973 | 1974 |
| 1970 – <1975 | | | 1 | 2 | 3 |
| Years | 1975 | 1976 | 1977 | 1978 | 1979 |
| 1975 – <1980 | | 1 | 1 | | |
| Years | 1980 | 1981 | 1982 | 1983 | 1984 |
| 1980 – <1985 | 1 | | 1 | 4 | 3 |
| Years | 1985 | 1986 | 1987 | 1988 | 1989 |
| 1985 – <1990 | 1 | 2 | 3 | 2 | 3 |
| Years | 1990 | 1991 | 1992 | 1993 | 1994 |
| 1990 – <1995 | 3 | 3 | 4 | 6 | 1 |
| Years | 1995 | 1996 | 1997 | 1998 | 1999 |
| 1995 – <2000 | 3 | 8 | 8 | 5 | 6 |
| Years | 2000 | 2001 | 2002 | 2003 | 2004 |
| 2000 – <2005 | 2 | 3 | 4 | 6 | 5 |
| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| 2005 – <2010 | 4 | 4 | 4 | 6 | 4 |
| Years | 2010 | 2011 | 2012 | 2013 | 2014 |
| 2010 – <2015 | 8 | 2 | 10 | 7 | 5 |
| Years | 2015 | 2016 | 2017 | 2018 | 2019 |
| 2015 – 2020 | 7 | 4 | 2 | 2 | 3 |

APPENDIX M SA – Year and jurisdiction disappeared



| SA LTMPs year Disappeared 1 January 1920 to 19 May 2020 | | | | | |
|--|------|------|------|------|------|
| Years | 1965 | 1966 | 1967 | 1968 | 1969 |
| 1965 – <1970 | | 3 | | | |
| Years | 1970 | 1971 | 1972 | 1973 | 1974 |
| 1970 – <1975 | 3 | | 2 | 3 | 1 |
| Years | 1975 | 1976 | 1977 | 1978 | 1979 |
| 1975 – <1980 | 2 | | 1 | 1 | |
| Years | 1980 | 1981 | 1982 | 1983 | 1984 |
| 1980 – <1985 | | | 1 | 1 | 4 |
| Years | 1985 | 1986 | 1987 | 1988 | 1989 |
| 1985 – <1990 | 2 | | | 1 | 2 |
| Years | 1990 | 1991 | 1992 | 1993 | 1994 |
| 1990 – <1995 | 2 | 3 | 3 | | 4 |
| Years | 1995 | 1996 | 1997 | 1998 | 1999 |
| 1995 – <2000 | 1 | 1 | 1 | 5 | 2 |
| Years | 2000 | 2001 | 2002 | 2003 | 2004 |
| 2000 – <2005 | 3 | 1 | 2 | 1 | 1 |
| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| 2005 – <2010 | 1 | | 1 | 1 | 2 |
| Years | 2010 | 2011 | 2012 | 2013 | 2014 |
| 2010 – <2015 | 3 | | 1 | 2 | 1 |
| Years | 2015 | 2016 | 2017 | 2018 | 2019 |
| 2015 – <2020 | | 2 | | 2 | 1 |
| Years | 2020 | | | | |
| 2020 – 2020 | 1 | | | | |

APPENDIX N TAS – Year and jurisdiction disappeared



**TAS LTMPs Year Disappeared
1 January 1920 to 19 May 2020**

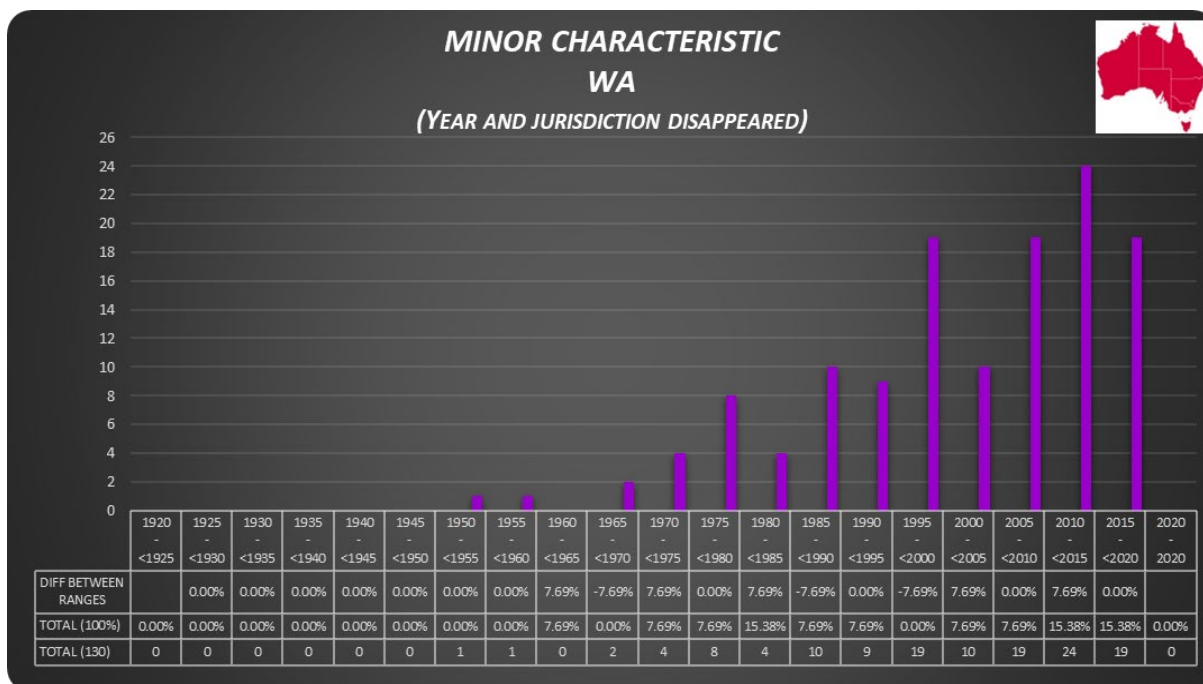
| Years | 1955 | 1956 | 1957 | 1958 | 1959 |
|--------------|------|------|------|------|------|
| 1955 – <1960 | | | | 2 | |
| Years | 1960 | 1961 | 1962 | 1963 | 1964 |
| 1960 – <1965 | | | 1 | | |
| Years | 1965 | 1966 | 1967 | 1968 | 1969 |
| 1965 – <1970 | | | | | 3 |
| Years | 1970 | 1971 | 1972 | 1973 | 1974 |
| 1970 – <1975 | | | 2 | | |
| Years | 1975 | 1976 | 1977 | 1978 | 1979 |
| 1975 – <1980 | 1 | | | 2 | |
| Years | 1980 | 1981 | 1982 | 1983 | 1984 |
| 1980 – <1985 | 1 | | | 1 | 1 |
| Years | 1985 | 1986 | 1987 | 1988 | 1989 |
| 1985 – <1990 | 1 | | 1 | 1 | 1 |
| Years | 1990 | 1991 | 1992 | 1993 | 1994 |
| 1990 – <1995 | 1 | 1 | 2 | 3 | 1 |
| Years | 1995 | 1996 | 1997 | 1998 | 1999 |
| 1995 – <2000 | 3 | 2 | | 1 | |
| Years | 2000 | 2001 | 2002 | 2003 | 2004 |
| 2000 – <2005 | | | 1 | | 2 |
| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| 2005 – <2010 | 2 | 2 | 1 | 2 | 1 |
| Years | 2010 | 2011 | 2012 | 2013 | 2014 |
| 2010 – <2015 | 1 | 1 | 3 | 2 | 1 |
| Years | 2015 | 2016 | 2017 | 2018 | 2019 |
| 2015 – <2020 | 1 | 3 | 2 | 2 | |
| Years | 2020 | | | | |
| 2020 – 2020 | 2 | | | | |

APPENDIX O VIC – Year and jurisdiction disappeared



| VIC LTMPs Year Disappeared 1 January 1920 to 19 May 2020 | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|
| Years | 1960 | 1961 | 1962 | 1963 | 1964 |
| 1960 – <1965 | | | | | 1 |
| Years | 1965 | 1966 | 1967 | 1968 | 1969 |
| 1965 – <1970 | | | 1 | 3 | 1 |
| Years | 1970 | 1971 | 1972 | 1973 | 1974 |
| 1970 – <1975 | | | 1 | 3 | 1 |
| Years | 1975 | 1976 | 1977 | 1978 | 1979 |
| 1975 – <1980 | 3 | 3 | | 2 | 1 |
| Years | 1980 | 1981 | 1982 | 1983 | 1984 |
| 1980 – <1985 | 2 | 2 | 1 | | 3 |
| Years | 1985 | 1986 | 1987 | 1988 | 1989 |
| 1985 – <1990 | 2 | 2 | 4 | 1 | 1 |
| Years | 1990 | 1991 | 1992 | 1993 | 1994 |
| 1990 – <1995 | 2 | 1 | 4 | 1 | 1 |
| Years | 1995 | 1996 | 1997 | 1998 | 1999 |
| 1995 – <2000 | 3 | 2 | 1 | 2 | 1 |
| Years | 2000 | 2001 | 2002 | 2003 | 2004 |
| 2000 – <2005 | 3 | 2 | 1 | 3 | |
| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| 2005 – <2010 | 9 | 3 | 1 | 3 | 1 |
| Years | 2010 | 2011 | 2012 | 2013 | 2014 |
| 2010 – <2015 | | 4 | 5 | 2 | 5 |
| Years | 2015 | 2016 | 2017 | 2018 | 2019 |
| 2015 – <2020 | 1 | 1 | 1 | | 1 |

APPENDIX P WA – Year and jurisdiction disappeared



| WA LTMPs Year Disappeared 1 January 1920 to 19 May 2020 | | | | | |
|--|------|------|------|------|------|
| Years | 1950 | 1951 | 1952 | 1953 | 1954 |
| 1950 – <1955 | | | | 1 | |
| Years | 1955 | 1956 | 1957 | 1958 | 1959 |
| 1955 – <1960 | | | | | 1 |
| Years | 1965 | 1966 | 1967 | 1968 | 1969 |
| 1965 – <1970 | | | 1 | | 1 |
| Years | 1970 | 1971 | 1972 | 1973 | 1974 |
| 1970 – <1975 | 1 | | | | 3 |
| Years | 1975 | 1976 | 1977 | 1978 | 1979 |
| 1975 – <1980 | 1 | 3 | 1 | 1 | 2 |
| Years | 1980 | 1981 | 1982 | 1983 | 1984 |
| 1980 – <1985 | 2 | | | 1 | 1 |
| Years | 1985 | 1986 | 1987 | 1988 | 1989 |
| 1985 – <1990 | 1 | 3 | 4 | 2 | |
| Years | 1990 | 1991 | 1992 | 1993 | 1994 |
| 1990 – <1995 | | 1 | 3 | 3 | 2 |
| Years | 1995 | 1996 | 1997 | 1998 | 1999 |
| 1995 – <2000 | 2 | 3 | 3 | 7 | 4 |
| Years | 2000 | 2001 | 2002 | 2003 | 2004 |
| 2000 – <2005 | 2 | 1 | 2 | 5 | |
| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| 2005 – <2010 | 3 | 5 | 5 | 4 | 2 |
| Years | 2010 | 2011 | 2012 | 2013 | 2014 |
| 2010 – <2015 | 7 | 4 | 2 | 8 | 3 |
| Years | 2015 | 2016 | 2017 | 2018 | 2019 |
| 2015 – <2020 | 8 | 2 | 3 | 2 | 4 |

APPENDIX Q Expanded version of Table 4–4

| Separated by jurisdiction, the % difference of LTMP counts when compared to the previous five years 1920 to 2020 (complete) | | | | | | | | |
|--|---|-------|-------|---|-------|-------|---|-------|
| Years | Decrease in % of LTMP cases between year ranges | | | Increase in % of LTMP cases between year ranges | | | No difference in LTMP cases between year ranges | |
| | ACT | NSW | NT | QLD | SA | TAS | VIC | WA |
| 1920 – <1925 | | | | | | | | |
| 1925 – <1930 | | -0.22 | | | | | | |
| 1930 – <1935 | | | | | | | | |
| 1935 – <1940 | | | | 0.60 | | | | |
| 1940 – <1945 | | | | -0.60 | | | | |
| 1945 – <1950 | | 0.22 | | | | | | |
| 1950 – <1955 | | | | | | | | 0.77 |
| 1955 – <1960 | | 0.22 | 2.27 | | | 3.28 | | |
| 1960 – <1965 | 7.69 | 0.67 | -2.27 | | | -1.64 | 0.98 | -0.77 |
| 1965 – <1970 | -7.69 | 0.22 | | | 4.00 | 3.28 | 3.92 | 1.54 |
| 1970 – <1975 | 7.69 | 0.22 | | 3.57 | 8.00 | -1.64 | | 1.54 |
| 1975 – <1980 | | 4.89 | | -2.38 | -6.67 | 1.64 | 3.92 | 3.08 |
| 1980 – <1985 | 7.69 | 3.11 | 6.82 | 4.17 | 2.67 | | -0.98 | -3.08 |
| 1985 – <1990 | -7.69 | 0.22 | -2.27 | 1.19 | -1.33 | 1.64 | 1.96 | 4.62 |
| 1990 – <1995 | | 3.11 | -2.27 | 3.57 | 9.33 | 6.56 | -0.98 | -0.77 |
| 1995 – <2000 | -7.69 | | 6.82 | 7.74 | -2.67 | -3.28 | | 7.69 |
| 2000 – <2005 | 7.69 | 2.22 | 4.55 | -5.95 | -2.67 | -4.92 | | -6.92 |
| 2005 – <2010 | | -6.22 | 11.36 | 1.19 | -4.00 | 8.20 | 7.84 | 6.92 |
| 2010 – <2015 | 7.69 | -0.44 | -6.82 | 5.95 | 2.67 | | -0.98 | 3.85 |
| 2015 – <2020 | | 2.22 | | -8.33 | -2.67 | | -11.76 | -3.85 |
| 2020 – 2020 | | | | | | | | |

Long-term missing persons categorised based on ABS ASCCEG

| ABS ASCCEG (Broad) | ABS ASCCEG (Narrow) | Total (886) Subtotal (866) |
|--------------------------------------|--------------------------|-------------------------------|
| Caucasian (so described) | | Total (659) |
| | Caucasian, so described | 659 |
| Oceanian | | Total (77) |
| | Australian Peoples, nfd | 65 |
| | New Zealand Peoples, nfd | 8 |
| | Tongan | 2 |
| | Papua New Guinean | 1 |
| | Polynesian, nfd | 1 |
| North–West European | | Total (48) |
| | British, nfd | 25 |
| | German | 10 |
| | French | 4 |
| | Irish | 4 |
| | Dutch | 2 |
| | Austrian | 1 |
| | Belgian | 1 |
| | Swedish | 1 |
| Southern and Eastern European | | Total (30) |
| | Greek | 6 |
| | Italian | 6 |
| | Eastern European, nfd | 4 |
| | Polish | 3 |

| | | |
|-----------------------------------|------------------------|-------------------|
| | Maltese | 2 |
| | Russian | 2 |
| | Southern European, nfd | 2 |
| | Czech | 1 |
| | Hungarian | 1 |
| | Portuguese | 1 |
| | Serbian | 1 |
| | Slovak | 1 |
| South–East Asian | | Total (20) |
| | Filipino | 5 |
| | Vietnamese | 5 |
| | Thai | 3 |
| | Malay | 2 |
| | South–East Asian, ndf | 2 |
| | Burmese | 1 |
| | Indonesian | 1 |
| | Khmer (Cambodian) | 1 |
| North–East Asian | | Total (16) |
| | Chinese | 12 |
| | Korean | 2 |
| | Japanese | 1 |
| | Taiwanese | 1 |
| Southern and Central Asian | | Total (16) |
| | Indian | 4 |
| | Sri Lankan | 4 |
| | Fijian Indian | 3 |
| | Nepalese | 3 |
| | Bangladeshi | 1 |
| | Pakistani | 1 |

| ABS ASCCEG (Broad) (cont.) | ABS ASCCEG (Narrow) | Total (886) Subtotal (20) |
|---|---|--------------------------------------|
| North African and Middle Eastern | | Total (8) |
| | North African and Middle Eastern, nfd | 3 |
| | Arab, nfd | 2 |
| | Assyrian | 1 |
| | Sudanese | 1 |
| | Turkish | 1 |
| Peoples of the Americans | | Total (6) |
| | American | 4 |
| | Canadian | 1 |
| | Central American, nfd | 1 |
| Sub-Saharan African | | Total (4) |
| | Eritrean | 1 |
| | Ethiopian | 1 |
| | Kenyan | 1 |
| | South African | 1 |
| Asian (so described) | | Total (2) |
| | Asian, so described | 2 |
| Unknown ethnicity of LTMPs | | 157 |
| ABS ASCCEG (Broad) | ABS ASCCEG (Narrow) | Total (46) |
| Other | All LTMPs Ethnicities counts ≤ 2 | Total (46) |
| Oceanian | Tongan | 2 |
| Oceanian | Papua New Guinean | 1 |
| Oceanian | Polynesian, nfd | 1 |
| North-West European | Dutch | 2 |
| North-West European | Austrian | 1 |
| North-West European | Belgian | 1 |
| North-West European | Swedish | 1 |
| Southern and Eastern European | Maltese | 2 |
| Southern and Eastern European | Russian | 2 |
| Southern and Eastern European | Southern European, nfd | 2 |
| Southern and Eastern European | Czech | 1 |
| Southern and Eastern European | Hungarian | 1 |
| Southern and Eastern European | Portuguese | 1 |
| Southern and Eastern European | Serbian | 1 |
| Southern and Eastern European | Slovak | 1 |
| South-East Asian | Malay | 2 |
| South-East Asian | South-East Asian, ndf | 2 |
| South-East Asian | Burmese | 1 |
| South-East Asian | Indonesian | 1 |
| South-East Asian | Khmer (Cambodian) | 1 |
| North-East Asian | Korean | 2 |
| North-East Asian | Japanese | 1 |
| North-East Asian | Taiwanese | 1 |
| Southern and Central Asian | Bangladeshi | 1 |
| Southern and Central Asian | Pakistani | 1 |
| North African and Middle Eastern | Arab, nfd | 2 |
| North African and Middle Eastern | Assyrian | 1 |
| North African and Middle Eastern | Sudanese | 1 |
| North African and Middle Eastern | Turkish | 1 |
| Peoples of the Americans | Canadian | 1 |
| Peoples of the Americans | Central American, nfd | 1 |
| Sub-Saharan African | Eritrean | 1 |
| Sub-Saharan African | Ethiopian | 1 |
| Sub-Saharan African | Kenyan | 1 |
| Sub-Saharan African | South African | 1 |
| Asian (so described) | Asian, so described | 2 |

APPENDIX S ABS ASCCEG and LTMP ethnicity count

| Ethnicities (Broad) – ABS ASCCEG (Broad) group [95]–[96], [102] | | | | |
|---|--|------------------------------------|---|------------------------------------|
| Ethnicities (Narrow) – ABS ASCCEG (Narrow) – Relates to graph 1, expanded to included Ethnicities that may increase the ethnicity population from which the LTMP may belong to – as shown in “ <i>Expanded ethnicities</i> ” [95]–[96], [102] | | | | |
| Expanded Ethnicities – Ethnicity population counts from ABS ASCCEG data that may increase the Ethnicity population counts from which the LTMPs may belong to – as shown in “ <i>Expanded ethnicities</i> ” [95]–[96], [102] | | | | |
| Long-Term Missing Person (Ethnicity Counts) – LTMPs counts and LTMP ethnicity, if no specific LTMP ethnicity, the LTMP ethnicity to which the ABS ASCCEG population count has been combined with – as shown in “ <i>Expanded ethnicities</i> ” [95]–[96], [102] | | | | |
| Exact Ethnicity – ABS ASCCEG population counts excluding the “ <i>Expanded ethnicities</i> ” that may increase ethnicity population from which the LTMP may belong to – as shown in “ <i>Exact ethnicity</i> ” [95]–[96], [102] | | | | |
| Total Ethnicity – $(n) \times 1,000$ population | | | | |
| Ethnicities (Broad) | Ethnicities (Narrow) | Expanded ethnicities | Long-term missing person ethnicity counts | Exact ethnicity |
| Caucasian (so described) | ABS ASCCEG total ethnicities (1) | ABS ASCCEG total (0.60) | Long-term missing person total ethnicities (659) | ABS ASCCEG total (0.60) |
| | Caucasian, so described | 0.60 | 659 | 0.60 |
| Oceanian | ABS ASCCEG total ethnicities (9) | ABS ASCCEG total (7,706.10) | Long-term missing person total ethnicities (77) | ABS ASCCEG total (199.61) |
| | Australian Peoples, nfd | 0.73 | 65 | 0.73 |
| | New Zealand Peoples, nfd | 0.05 | 8 | 0.05 |
| | Tongan | 32.69 | 2 | 32.69 |
| | Papua New Guinean | 18.80 | 1 | 18.80 |
| | Polynesian, nfd | 3.17 | 1 | 3.17 |
| | Australian | 7,298.24 | Caucasian, so described | |
| | Australian Aboriginal | 144.17 | Australian Peoples, nfd | 144.17 |
| | New Zealander | 207.72 | New Zealand Peoples, nfd | |
| | Polynesian, nec | 0.53 | Polynesian, nfd | |
| North–West European | ABS ASCCEG total ethnicities (10) | ABS ASCCEG total (3,952.08) | Long-term missing person total ethnicities (48) | ABS ASCCEG total (3,951.20) |
| | British, nfd | 9.39 | 25 | 9.39 |
| | German | 982.23 | 10 | 982.23 |
| | French | 135.38 | 4 | 135.38 |
| | Irish | 2,388.06 | 4 | 2,388.06 |
| | Dutch | 339.55 | 2 | 339.55 |
| | Austrian | 44.41 | 1 | 44.41 |
| | Belgian | 11.97 | 1 | 11.97 |
| | Swedish | 40.21 | 1 | 40.21 |
| | British, nec | 0.54 | British, nfd | |
| | Frisian | 0.34 | German | |

| Ethnicities (Broad) (cont.) | Ethnicities (Narrow) | Expanded ethnicities | Long-term missing person ethnicity counts | Exact ethnicity |
|--|--|--|--|--|
| Southern and Eastern European | ABS ASCCEG total ethnicities (14) | ABS ASCCEG total (2,098.10) | Long-term missing person total ethnicities (30) | ABS ASCCEG total (2,097.30) |
| | Greek | 397.43 | 6 | 397.43 |
| | Italian | 1,000.01 | 6 | 1,000.01 |
| | Eastern European, nfd | 9.33 | 4 | 9.33 |
| | Polish | 183.97 | 3 | 183.97 |
| | Maltese | 175.56 | 2 | 175.56 |
| | Russian | 85.66 | 2 | 85.66 |
| | Southern European, nfd | 0.09 | 2 | 0.09 |
| | Czech | 24.48 | 1 | 24.48 |
| | Hungarian | 73.61 | 1 | 73.61 |
| | Portuguese | 61.89 | 1 | 61.89 |
| | Serbian | 73.90 | 1 | 73.90 |
| | Slovak | 11.37 | 1 | 11.37 |
| | Sorb/Wend | 0.23 | German | |
| | Eastern European, nec | 0.57 | Eastern European, nfd | |
| Southern and Eastern European | ABS ASCCEG total ethnicities (8) | ABS ASCCEG total (406.83) | Long-term missing person total ethnicities (8) | ABS ASCCEG total (0) |
| | Bosnian | 23.63 | Southern European, nfd | |
| | Croatian | 133.27 | Southern European, nfd | |
| | Cypriot | 28.99 | Southern European, nfd | |
| | Gibraltar | 0.20 | Southern European, nfd | |
| | Montenegrin | 2.30 | Southern European, nfd | |
| | Southern European, nec | 0.04 | Southern European, nfd | |
| | Spanish | 119.96 | Southern European, nfd | |
| | Macedonian | 98.44 | Slovak | |
| South–East Asian | ABS ASCCEG total ethnicities (23) | ABS ASCCEG total (892.64) | Long-term missing person total ethnicities (20) | ABS ASCCEG total (856.38) |
| | Filipino | 304.02 | 5 | 304.02 |
| | Vietnamese | 294.80 | 5 | 294.80 |
| | Thai | 70.24 | 3 | 70.24 |
| | Malay | 46.08 | 2 | 46.08 |
| | South–East Asian, ndf | 1.06 | 2 | 1.06 |
| | Burmese | 28.56 | 1 | 28.56 |
| | Indonesian | 65.89 | 1 | 65.89 |
| | Khmer (Cambodian) | 45.73 | 1 | 45.73 |
| | Acehnese | 0.16 | Indonesian | |
| | Anglo–Burmese | 0.57 | Burmese | |
| | Balinese | 0.81 | Indonesian | |
| | Bruneian | 0.24 | Burmese | |
| | Chin | 7.85 | Burmese | |
| | Hmong | 3.44 | South–East Asian, nfd | |
| | Javanese | 1.46 | Indonesian | |
| | Kadazan | 0.39 | Malay | |
| | Karen | 9.94 | South–East Asian, nfd | |
| | Madurese | 0.00 | Indonesian | |
| | Mon | 0.37 | Burmese | |
| | Rohingya | 1.92 | Burmese | |
| | Sundanese | 0.15 | Indonesian | |
| | Temoq | 0.00 | Malay | |
| | Timorese | 8.96 | South–East Asian, nfd | |

| Ethnicities (Broad) (cont.) | Ethnicities (Narrow) | Expanded ethnicities | Long-term missing person ethnicity counts | Exact ethnicity |
|---|--|------------------------------------|--|------------------------------------|
| North–East Asian | ABS ASCCEG total ethnicities (9) | ABS ASCCEG total (1,421.70) | Long-term missing person total ethnicities (16) | ABS ASCCEG total (1,421.16) |
| | Chinese | 1,213.90 | 12 | 1,213.90 |
| | Korean | 123.02 | 2 | 123.02 |
| | Japanese | 65.71 | 1 | 65.71 |
| | Taiwanese | 18.53 | 1 | 18.53 |
| | Chinese Asian, nec | 0.53 | Chinese | |
| | Chinese Asian, nfd | 0.00 | Chinese | |
| | North–East Asian, nfd | 0.00 | Chinese | |
| | Other North–East Asian, nec | 0.01 | Chinese | |
| | Other North–East Asian, nfd | 0.00 | Chinese | |
| Southern and Central Asian | ABS ASCCEG total ethnicities (22) | ABS ASCCEG total (1,055.20) | Long-term missing person total ethnicities (16) | ABS ASCCEG total (910.31) |
| | Indian | 619.16 | 4 | 619.16 |
| | Sri Lankan | 110.92 | 4 | 110.92 |
| | Fijian Indian | 13.51 | 3 | 13.51 |
| | Nepalese | 62.81 | 3 | 62.81 |
| | Bangladeshi | 39.57 | 1 | 39.57 |
| | Pakistani | 64.34 | 1 | 64.34 |
| | Anglo–Indian | 13.22 | Indian | |
| | Bengali | 10.50 | Bangladeshi | |
| | Burgher | 0.60 | Sri Lankan | |
| | Hazara | 16.05 | Nepalese | |
| | Indian Tamil | 0.55 | Indian | |
| | Kashmiri | 0.66 | Indian | |
| | Malayali | 1.97 | Indian | |
| | Parsi | 0.20 | Indian | |
| | Pathan | 2.33 | Indian | |
| | Punjabi | 34.16 | Indian | |
| | Sikh | 17.05 | Indian | |
| | Sindhi | 0.69 | Indian | |
| | Sinhalese | 19.36 | Sri Lankan | |
| | Sri Lankan Tamil | 7.99 | Sri Lankan | |
| | Tamil, nfd | 17.98 | Sri Lankan | |
| | Telugu | 1.58 | Indian | |
| North African and Middle Eastern | ABS ASCCEG total ethnicities (33) | ABS ASCCEG total (575.36) | Long-term missing person total ethnicities (8) | ABS ASCCEG total (170.81) |
| | North African and Middle Eastern, nfd | 7.56 | 3 | 7.56 |
| | Arab, nfd | 42.12 | 2 | 42.12 |
| | Assyrian | 30.15 | 1 | 30.15 |
| | Sudanese | 18.01 | 1 | 18.01 |
| | Turkish | 72.97 | 1 | 72.97 |
| | Algerian | 1.87 | Arab, nfd | |
| | Arab, nec | 0.74 | Arab, nfd | |
| | Bahraini | 0.17 | Arab, nfd | |
| | Bari | 0.13 | Sudanese | |
| | Berber | 0.31 | Sudanese | |
| | Coptic | 1.41 | Sudanese | |
| | Darfur | 0.01 | Sudanese | |
| | Dinka | 1.79 | Sudanese | |
| | Egyptian | 50.52 | Arab, nfd | |

| Ethnicities (Broad) (cont.) | Ethnicities (Narrow) | Expanded ethnicities | Long-term missing person ethnicity counts | Exact ethnicity |
|------------------------------------|---|----------------------------------|---|----------------------------------|
| | Emirati | 0.15 | Arab, nfd | |
| | Iraqi | 42.88 | Arab, nfd | |
| | Jordanian | 5.59 | Arab, nfd | |
| | Kuwaiti | 1.17 | Arab, nfd | |
| | Lebanese | 230.87 | Arab, nfd | |
| | Libyan | 1.20 | Arab, nfd | |
| | Moroccan | 3.18 | Arab, nfd | |
| | Omani | 0.45 | Arab, nfd | |
| | Other North African and Middle Eastern, nec | 9.67 | North African and Middle Eastern, nfd | |
| | Other North African and Middle Eastern, nfd | 0.17 | North African and Middle Eastern, nfd | |
| | Palestinian | 13.29 | Arab, nfd | |
| | Peoples of the Sudan, nec | 0.08 | Sudanese | |
| | Peoples of the Sudan, nfd | 2.25 | Sudanese | |
| | Qatari | 0.03 | Arab, nfd | |
| | Saudi Arabian | 4.17 | Arab, nfd | |
| | South Sudanese | 10.76 | Sudanese | |
| | Syrian | 19.96 | Arab, nfd | |
| | Tunisian | 0.76 | Arab, nfd | |
| | Yemeni | 0.97 | Arab, nfd | |
| Peoples of the Americans | ABS ASCCEG total ethnicities (5) | ABS ASCCEG total (101.74) | Long-term missing person total ethnicities (6) | ABS ASCCEG total (99.36) |
| | American | 63.97 | 4 | 63.97 |
| | Canadian | 34.82 | 1 | 34.82 |
| | Central American, nfd | 0.57 | 1 | 0.57 |
| | Central American, nec | 0.50 | Central American, nfd | |
| | French Canadian | 1.88 | Canadian | |
| Sub-Saharan African | ABS ASCCEG total ethnicities (18) | ABS ASCCEG total (156.32) | Long-term missing person total ethnicities (4) | ABS ASCCEG total (145.98) |
| | Eritrean | 6.86 | 1 | 6.86 |
| | Ethiopian | 13.72 | 1 | 13.72 |
| | Kenyan | 6.44 | 1 | 6.44 |
| | South African | 118.96 | 1 | 118.96 |
| | Afrikaner | 4.87 | South African | |
| | Amhara | 0.32 | Ethiopian | |
| | Batswana | 0.51 | South African | |
| | Kunama | 0.02 | Eritrean | |
| | Malawian | 0.55 | South African | |
| | Masai | 0.03 | Kenyan | |
| | Namibian | 0.31 | South African | |
| | Ogaden | 0.03 | Ethiopian | |
| | Oromo | 1.82 | Ethiopian | |
| | Shona | 0.92 | South African | |
| | Sub-Saharan African, nfd | 0.17 | South African | |
| | Tigrayan | 0.27 | Ethiopian | |
| | Tigre | 0.05 | Eritrean | |
| | Zulu | 0.47 | South African | |
| Asian (so described) | ABS ASCCEG total ethnicities (1) | ABS ASCCEG total (17.17) | Long-term missing person total ethnicities (2) | ABS ASCCEG total (17.17) |
| | Asian, so described | 17.17 | 2 | 17.17 |
| Unknown ethnicity of LTMPs | | | 157 | |

| Ethnicities (Broad) (cont.) | Ethnicities (Narrow) | Expanded ethnicities | Long-term missing person ethnicity counts | Exact ethnicity |
|--|---|--|--|---|
| Other | All LTMPs Ethnicities Counts <= 2 Total LTMP <= (36) Total ethnicities (103) | ABS ASCCEG total (1,857.64) | ABS ASCCEG expanded ethnicities Total LTMP ethnicities <= (46) Total expanded ethnicities (67) | Expanded ABS ASCCEG ethnicity total (861.55) |
| Oceania | Tongan | 32.69 | 2 | |
| Oceania | Papua New Guinean | 18.80 | 1 | |
| Oceania | Polynesian, nfd | 3.17 | 1 | |
| Oceania | Polynesian, nec | | Polynesian, nfd | 0.53 |
| North-West European | Dutch | 339.55 | 2 | |
| North-West European | Austrian | 44.41 | 1 | |
| North-West European | Belgian | 11.97 | 1 | |
| North-West European | Swedish | 40.21 | 1 | |
| Southern and Eastern European | Maltese | 175.56 | 2 | |
| Southern and Eastern European | Russian | 85.66 | 2 | |
| Southern and Eastern European | Southern European, nfd | 0.09 | 2 | |
| Southern and Eastern European | Czech | 24.48 | 1 | |
| Southern and Eastern European | Hungarian | 73.61 | 1 | |
| Southern and Eastern European | Portuguese | 61.89 | 1 | |
| Southern and Eastern European | Serbian | 73.90 | 1 | |
| Southern and Eastern European | Slovak | 11.37 | 1 | |
| Southern and Eastern European | Bosnian | | Southern European, nfd | 23.63 |
| Southern and Eastern European | Croatian | | Southern European, nfd | 133.27 |
| Southern and Eastern European | Cypriot | | Southern European, nfd | 28.99 |
| Southern and Eastern European | Gibraltar | | Southern European, nfd | 0.20 |
| Southern and Eastern European | Montenegrin | | Southern European, nfd | 2.30 |

| Ethnicities (Broad) (cont.) | Ethnicities (Narrow) | Expanded ethnicities | Long-term missing person ethnicity counts | Exact ethnicity |
|---|-----------------------------|-----------------------------|--|------------------------|
| Southern and Eastern European | Southern European, nec | | Southern European, nfd | 0.04 |
| Southern and Eastern European | Spanish | | Southern European, nfd | 119.96 |
| Southern and Eastern European | Macedonian | | Slovak | 98.44 |
| South-East Asian | Malay | 46.08 | 2 | |
| South-East Asian | South-East Asian, ndf | 1.06 | 2 | |
| South-East Asian | Burmese | 28.56 | 1 | |
| South-East Asian | Indonesian | 65.89 | 1 | |
| South-East Asian | Khmer (Cambodian) | 45.73 | 1 | |
| South-East Asian | Kadazan | | Malay | 0.39 |
| South-East Asian | Temoq | | Malay | 0.00 |
| South-East Asian | Hmong | | South-East Asian, nfd | 3.44 |
| South-East Asian | Karen | | South-East Asian, nfd | 9.94 |
| South-East Asian | Timorese | | South-East Asian, nfd | 8.96 |
| South-East Asian | Anglo-Burmese | | Burmese | 0.57 |
| South-East Asian | Bruneian | | Burmese | 0.24 |
| South-East Asian | Chin | | Burmese | 7.85 |
| South-East Asian | Mon | | Burmese | 0.37 |
| South-East Asian | Rohingya | | Burmese | 1.92 |
| South-East Asian | Acehnese | | Indonesian | 0.16 |
| South-East Asian | Balinese | | Indonesian | 0.81 |
| South-East Asian | Javanese | | Indonesian | 1.46 |
| South-East Asian | Madurese | | Indonesian | 0.00 |
| South-East Asian | Sundanese | | Indonesian | 0.15 |
| North-East Asian | Korean | 123.02 | 2 | |
| North-East Asian | Japanese | 65.71 | 1 | |
| North-East Asian | Taiwanese | 18.53 | 1 | |
| Southern and Central Asian | Bangladeshi | 39.57 | 1 | |
| Southern and Central Asian | Pakistani | 64.34 | 1 | |
| Southern and Central Asian | Bengali | | Bangladeshi | 10.50 |
| North African and Middle Eastern | Arab, nfd | 42.12 | 2 | |

| | | | | |
|---|---------------|-------|-----------|--------|
| North African and Middle Eastern | Assyrian | 30.15 | 1 | |
| North African and Middle Eastern | Sudanese | 18.01 | 1 | |
| North African and Middle Eastern | Turkish | 72.97 | 1 | |
| North African and Middle Eastern | Algerian | | Arab, nfd | 1.87 |
| North African and Middle Eastern | Arab, nec | | Arab, nfd | 0.74 |
| North African and Middle Eastern | Bahraini | | Arab, nfd | 0.17 |
| North African and Middle Eastern | Egyptian | | Arab, nfd | 50.52 |
| North African and Middle Eastern | Emirati | | Arab, nfd | 0.15 |
| North African and Middle Eastern | Iraqi | | Arab, nfd | 42.88 |
| North African and Middle Eastern | Jordanian | | Arab, nfd | 5.59 |
| North African and Middle Eastern | Kuwaiti | | Arab, nfd | 1.17 |
| North African and Middle Eastern | Lebanese | | Arab, nfd | 230.87 |
| North African and Middle Eastern | Libyan | | Arab, nfd | 1.20 |
| North African and Middle Eastern | Moroccan | | Arab, nfd | 3.18 |
| North African and Middle Eastern | Omani | | Arab, nfd | 0.45 |
| North African and Middle Eastern | Palestinian | | Arab, nfd | 13.29 |
| North African and Middle Eastern | Qatari | | Arab, nfd | 0.03 |
| North African and Middle Eastern | Saudi Arabian | | Arab, nfd | 4.17 |
| North African and Middle Eastern | Syrian | | Arab, nfd | 19.96 |
| North African and Middle Eastern | Tunisian | | Arab, nfd | 0.76 |
| North African and Middle Eastern | Yemeni | | Arab, nfd | 0.97 |
| North African and Middle Eastern | Bari | | Sudanese | 0.13 |
| North African and Middle Eastern | Berber | | Sudanese | 0.31 |

| Ethnicities (Broad) (cont.) | Ethnicities (Narrow) | Expanded ethnicities | Long-term missing person ethnicity counts | Exact ethnicity |
|---|-----------------------------|-----------------------------|--|------------------------|
| North African and Middle Eastern | Coptic | | Sudanese | 1.41 |
| North African and Middle Eastern | Darfur | | Sudanese | 0.01 |
| North African and Middle Eastern | Dinka | | Sudanese | 1.79 |
| North African and Middle Eastern | Peoples of the Sudan, nec | | Sudanese | 0.08 |
| North African and Middle Eastern | Peoples of the Sudan, nfd | | Sudanese | 2.25 |
| North African and Middle Eastern | South Sudanese | | Sudanese | 10.76 |
| Peoples of the Americans | Canadian | 34.82 | 1 | |
| Peoples of the Americans | Central American, nfd | 0.57 | 1 | |
| Peoples of the Americans | French Canadian | | Canadian | 1.88 |
| Peoples of the Americans | Central American, nec | | Central American, nfd | 0.50 |
| Sub-Saharan African | Eritrean | 6.86 | 1 | |
| Sub-Saharan African | Ethiopian | 13.72 | 1 | |
| Sub-Saharan African | Kenyan | 6.44 | 1 | |
| Sub-Saharan African | South African | 118.96 | 1 | |
| Sub-Saharan African | Afrikaner | | South African | 4.87 |
| Sub-Saharan African | Amhara | | Ethiopian | 0.32 |
| Sub-Saharan African | Batswana | | South African | 0.51 |
| Sub-Saharan African | Kunama | | Eritrean | 0.02 |
| Sub-Saharan African | Malawian | | South African | 0.55 |
| Sub-Saharan African | Masai | | Kenyan | 0.03 |
| Sub-Saharan African | Namibian | | South African | 0.31 |
| Sub-Saharan African | Ogaden | | Ethiopian | 0.03 |
| Sub-Saharan African | Oromo | | Ethiopian | 1.82 |
| Sub-Saharan African | Shona | | South African | 0.92 |
| Sub-Saharan African | Sub-Saharan African, nfd | | South African | 0.17 |
| Sub-Saharan African | Tigrayan | | Ethiopian | 0.27 |
| Sub-Saharan African | Tigre | | Eritrean | 0.05 |

| Ethnicities (Broad) (cont.) | Ethnicities (Narrow) | Expanded ethnicities | Long-term missing person ethnicity counts | Exact ethnicity |
|--|---------------------------------|---------------------------------|--|----------------------------|
| Sub-Saharan African | Zulu | | South African | 0.47 |
| Asian (so described) | Asian, so described | 17.17 | 2 | |

APPENDIX T ABS Ancestry by state/territory descriptions expanded version of Table 5–3

| ABS – Ancestry by State and Territory of Usual Residence Table 5–3 – 20 July 2016 | | | | |
|--|---------------------------------|---|--|--------------------------------|
| Broad Oceanian | Broad North–West European | Broad Southern and Eastern European | Broad North African and Middle Eastern | Broad South–East Asian |
| Narrow | Narrow | Narrow | Narrow | Narrow |
| Australian | Austrian | Albanian | Algerian | Acehnese |
| Australian Aboriginal | Belgian | Basque | Arab, nec | Anglo–Burmese |
| Australian Peoples, nfd | British, nec | Belarusan | Arab, nfd | Balinese |
| Australian South Sea Islander | British, nfd | Bosnian | Assyrian | Bruneian |
| Cook Islander | Channel Islander | Bulgarian | Bahraini | Burmese |
| Fijian | Danish | Catalan | Bari | Chin |
| Hawaiian | Dutch | Croatian | Berber | Filipino |
| Kiribati | English | Cypriot | Chaldean | Hmong |
| Maori | Finnish | Czech | Coptic | Indonesian |
| Melanesian and Papuan, nec | Flemish | Eastern European, nec | Darfur | Javanese |
| Melanesian and Papuan, nfd | French | Eastern European, nfd | Dinka | Kadazan |
| Micronesian, nec | Frisian | Estonian | Egyptian | Karen |
| Micronesian, nfd | German | Gibraltarian | Emirati | Khmer (Cambodian) |
| Nauruan | Icelandic | Greek | Iranian | Lao |
| New Caledonian | Irish | Hungarian | Iraqi | Madurese |
| New Zealand Peoples, nfd | Luxembourg | Italian | Jewish | Mainland South–East Asian, nec |
| New Zealander | Manx | Latvian | Jordanian | Mainland South–East Asian, nfd |
| Niuean | Northern European, nec | Lithuanian | Kurdish | Malay |
| Ni–Vanuatu | Northern European, nfd | Macedonian | Kuwaiti | Maritime South–East Asian, nec |
| Oceanian, nfd | North–West European, nfd | Maltese | Lebanese | Maritime South–East Asian, nfd |
| Papua New Guinean | Norwegian | Moldovan | Libyan | Mon |
| Pitcairn | Scottish | Montenegrin | Mandaean | Rohingya |
| Polynesian, nec | Swedish | Polish | Moroccan | Singaporean |
| Polynesian, nfd | Swiss | Portuguese | North African and Middle Eastern, nfd | South–East Asian, nfd |
| Samoan | Welsh | Roma Gypsy | Nubian | Sundanese |
| Solomon Islander | Western European, nec | Romanian | Nuer | Temoq |
| Tahitian | Western European, nfd | Russian | Omani | Thai |
| Tokelauan | | Serbian | Other North African and Middle Eastern, nec | Timorese |
| Tongan | | Slovak | Other North African and Middle Eastern, nfd | Vietnamese |
| Torres Strait Islander | | Slovene | Palestinian | |
| Tuvaluan | | Sorb/Wend | Peoples of the Sudan, nec | |
| | | South Eastern European, nec | Peoples of the Sudan, nfd | |
| | | South Eastern European, nfd | Qatari | |
| | | Southern and Eastern European, nfd | Saudi Arabian | |
| | | Southern European, nec | South Sudanese | |
| | | Southern European, nfd | Sudanese | |
| | | Spanish | Syrian | |
| | | Ukrainian | Tunisian | |
| | | Vlach | Turkish | |
| | | | Yemeni | |
| | | | Yezidi | |

ABS – Ancestry by state and territory of usual residence

Table 5-3 – 20 July 2016 (cont.)

| Broad | Broad | Broad | Broad | Supplementary codes |
|-----------------------------|-----------------------------------|--------------------------------|--------------------------------|----------------------------|
| North-East Asian | Southern and Central Asian | Peoples of the Americas | Sub-Saharan African | Inadequately described |
| Narrow | Narrow | Narrow | Narrow | Eurasian, so described |
| Chinese | Afghan | African American | Acholi | Asian, so described |
| Chinese Asian, nec | Anglo-Indian | American | Afrikaner | African, so described |
| Chinese Asian, nfd | Armenian | Argentinian | Akan | European, so described |
| Japanese | Azeri | Barbadian | Amhara | Caucasian, so described |
| Korean | Bangladeshi | Bermudan | Angolan | Creole, so described |
| Mongolian | Bengali | Bolivian | Batswana | Not stated |
| North-East Asian, nfd | Bhutanese | Brazilian | Burundian | |
| Other North-East Asian, nec | Burgher | Canadian | Cameroonian | |
| Other North-East Asian, nfd | Central Asian, nec | Caribbean Islander, nec | Central and West African, nec | |
| Taiwanese | Central Asian, nfd | Central American, nec | Central and West African, nfd | |
| Tibetan | Fijian Indian | Central American, nfd | Congolese | |
| | Georgian | Chilean | Eritrean | |
| | Gujarati | Colombian | Ethiopian | |
| | Hazara | Costa Rican | Fulani | |
| | Indian | Cuban | Ghanaian | |
| | Indian Tamil | Ecuadorian | Gio | |
| | Kashmiri | French Canadian | Hutu | |
| | Kazakh | Guatemalan | Igbo | |
| | Kyrgyz | Guyanese | Ivorean | |
| | Malayali | Hispanic North American | Kenyan | |
| | Maldivian | Jamaican | Krahn | |
| | Nepalese | Mayan | Kunama | |
| | Pakistani | Mexican | Liberian | |
| | Parsi | Native North American Indian | Madi | |
| | Pathan | Nicaraguan | Malawian | |
| | Punjabi | North American, nec | Mandinka | |
| | Sikh | North American, nfd | Masai | |
| | Sindhi | Paraguayan | Mauritian | |
| | Sinhalese | Peoples of the Americas, nfd | Mozambican | |
| | Southern and Central Asian, nfd | Peruvian | Namibian | |
| | Southern Asian, nec | Puerto Rican | Nigerian | |
| | Southern Asian, nfd | Salvadoran | Ogaden | |
| | Sri Lankan | South American, nec | Oromo | |
| | Sri Lankan Tamil | South American, nfd | Rwandan | |
| | Tajik | Trinidadian Tobagonian | Senegalese | |
| | Tamil, nfd | Uruguayan | Seychellois | |
| | Tatar | Venezuelan | Shona | |
| | Telugu | | Sierra Leonean | |
| | Turkmen | | Somali | |
| | Uighur | | South African | |
| | Uzbek | | Southern and East African, nec | |
| | | | Southern and East African, nfd | |
| | | | Sub-Saharan African, nfd | |

ABS – Ancestry by state and territory of usual residence
Table 5–3 – 20 July 2016 (cont.)

| Broad | Broad | Broad | Broad | Supplementary codes |
|-------------------------|-----------------------------------|--------------------------------|----------------------------|----------------------------|
| North–East Asian | Southern and Central Asian | Peoples of the Americas | Sub–Saharan African | |
| Narrow | Narrow | Narrow | Narrow | |
| | | | Swahili | |
| | | | Swazilander | |
| | | | Tanzanian | |
| | | | Themne | |
| | | | Tigrayan | |
| | | | Tigre | |
| | | | Togolese | |
| | | | Ugandan | |
| | | | Yoruba | |
| | | | Zambian | |
| | | | Zimbabwean | |
| | | | Zulu | |

APPENDIX U Access to ANZPAA policy on missing persons

Some personal details have been removed and formatting changed; however, no alternations have been made to content of response.

ANZPAA email response to access policy, dated 25 February 2021

1. ANZPAA 2015. *Missing persons: A policy for Australian policing 2015 and/or*
2. *Australia New Zealand Policy for Missing Persons Investigations 2020*

ANZPAA RESPONSE

Your request for access to the *Australia New Zealand Policy for Missing Persons Investigations 2020* (noting the 2015 Policy originally requested has been rescinded) has been reviewed and the document not approved for release.

The Policy was developed to provide general foundation advice for internal police use only and is not intended to replace jurisdictional policies and operating procedures pertaining to missing persons investigations.

While we regret we are unable to provide you with access to the Policy, we wish you will with your research.

ANZPAA Risk Assessment document (9 March 2012) outlining reasons for denying access to:

1. ANZPAA 2015. *Missing persons: A policy for Australian policing 2015 and/or the Australia New Zealand Policy for Missing Persons Investigations 2020*

Copy of Risk Assessment from ANZPAA – 9 March 2021

| |
|--------------------|
| Risk Outcome |
| Low Risk |
| Limited Risk |
| Medium Risk |

| | | |
|---|---|--|
| Date | 27 January 2021 | |
| Requester | Belle Belle | |
| Position | Masters Research Candidate | |
| Organisation | James Cook University, Townsville | |
| Country | Australia | |
| Access requested for | Australian New Zealand Policing Advisory Agency 2015. <i>Missing persons: A policy for Australian policing 2015 and/or the Australia New Zealand Policy for Missing Persons Investigations 2020</i> | |
| Is the requestor Australian or New Zealand police? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |

ANZPAA risk assessment document outlining reasoning for non-approval of access to: (cont.)

| | | |
|--|---|---|
| | <p>If <i>Yes</i> provide the requestor with their ATEAG member's contact details and recommend that products are accessed directly through their jurisdiction's academy. If <i>No</i>, answer Q2 and Q3.</p> | |
| <p>If the requestor is not police, is the requestor involved in Australian or New Zealand law enforcement or partners with/assists police (i.e. Border Force, ACIC, Crime Commission, etc.)?</p> | <p>Yes <input type="checkbox"/></p> | <p>No <input checked="" type="checkbox"/></p> |
| <p>Is the requestor a statutory body?</p> | <p>Yes <input type="checkbox"/></p> | <p>No <input checked="" type="checkbox"/></p> |
| | <p>If <i>Yes</i> to Q2 and Q3, release may be considered 'Low Risk'. Progress to the ANZPAA CEO to consider approval to release requested products. If <i>No</i> to either Q2 or Q3, answer Q4.</p> | |
| <p>Is the requested products a repeat request for products recently* provided to the same requestor; or part of a suite of products (e.g. an elective Unit of Competency** from a previously provided Qualification) previously requested by the same requestor?</p> | <p>Yes <input type="checkbox"/></p> | <p>No <input checked="" type="checkbox"/></p> |
| <p>** E.g. was provided in the last 12 months. *Consult ANZPAA Policy and Project Team to confirm.</p> | <p>If <i>Yes</i> to Q4 progress to the ANZPAA CEO to consider approval to release requested products. If <i>No</i> to Q4, answer Q5-13.</p> | |
| <p>Could access negatively affect police administration or policing's law enforcement or public safety duties?</p> | <p>Low Risk: The material requested does not specify or detail any methods or techniques that could be used directly to breach public safety or security.</p> | |
| <p>Could access reveal policing operational methodologies?</p> | <p>Medium Risk: The material requested may provide limited information about operational policing methodologies to those external to policing.</p> | |
| <p>Could access damage policing's stakeholder relations?</p> | <p>Low Risk: The intended use of the material requested is as reference material as part of a research project being undertaken.</p> | |
| <p>Could access disclose, or enable a person to ascertain, the existence or identity of a confidential source of police information (e.g. a police undercover specialist providing input to ANZPAA TAE products)?</p> | <p>Low Risk: The material requested does not contain details of confidential sources of police information.</p> | |
| <p>Could access disclose the identity of police personnel or details of covert police groups/operations?</p> | <p>Low Risk: The material requested does not contain details of police personnel or details of cover police groups/operations.</p> | |
| <p>Could access damage policing's relations with government, international police organisations, defence or affect international diplomatic relations?</p> | <p>Low Risk: The intended use of the material requested is as reference material as part of a research project being undertaken.</p> | |

ANZPAA risk assessment document outlining reasoning for non-approval of access to: (cont.)

| | |
|--|---|
| <p>Could access reveal Australian State, Territory or New Zealand government deliberative processes pertaining to policing (e.g. funding arrangements, personnel numbers, equipment procurement, etc.)?</p> | <p>Low Risk: The material requested does not relate to deliberative processes within Australian State, Territory or New Zealand government agencies.</p> |
| <p>Could access be reasonably expected to result in intellectual property theft?</p> | <p>Limited Risk: The intended use of the material requested is as reference material as part of a research project being undertaken. However, ANZPAA will not have oversight of how data gleaned from the material requested will be referred to in any research results and/or conclusions, which may impact intellectual property integrity should the research result in publication.</p> |
| <p>Is the requestor a known trusted partner (i.e. has the requestor has a recent similar access request approved?</p> | <p>Medium Risk: Requestor is unknown to ANZPAA and policing jurisdictions Requestor is an academic student whose is researching "Identifying characteristics of long-Term Missing persons within Australia"</p> |
| | <p>If 'Low Risk' to Q5-13, progress to ANZPAA CEO to consider approval to release products to requestor. If 'Limited Risk' or 'Medium Risk' to Q5-13, progress to the APPN to consider approval to release products to requestor.</p> |

APPENDIX V Best practices document credibility list

| Source websites/webpages reliability precedence order |
|--|
| Coroner's Report |
| Law enforcement media release (including archived) |
| NMPCC and/or AMPR |
| Trove – online library of current and historical information obtained from universities, museums, galleries, and archives [87] |
| Crime Stoppers [88] |
| Ancestry records |
| Cemetery records/images |
| News/media reports |
| Social Network/media platforms i.e., LinkedIn, Facebook |
| Random ad hoc websites/pages |
| Birth dates |
| Coroner's Report |
| Headstone |
| Social Network/media platforms i.e., LinkedIn, Facebook |
| Law enforcement media release (including archived) |
| NMPCC and/or AMPR |
| Trove – online library of current and historical information obtained from universities, museums, galleries, and archives [87] |
| Crime Stoppers [88] |
| Ancestry records |
| Random ad hoc websites/pages |